



HARGIS + ASSOCIATES, INC.

HYDROGEOLOGY • ENGINEERING

La Jolla Gateway
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Phone: 858.455.6500
Fax: 858.455.6533

January 30, 2019

VIA EMAIL AND GEOTRACKER UPLOAD

Mr. Carl Bernhardt
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
3737 Main Street, Suite 500
Riverside, California 92501-3348

Re: 2018 Annual Groundwater Monitoring and Remediation System
Operation Results, Raytheon Company, Former Building 684, Fullerton, California

Dear Mr. Bernhardt:

This letter presents the results of groundwater monitoring and operation of the full-scale groundwater remediation system (groundwater remediation system) and of the soil vapor extraction system (SVE system) for the period January 2018 through December 2018 at the Raytheon Company, Former Building 684 site (the Site), located at 2357 Moore Avenue (formerly 651 North Gilbert Street), Fullerton, California (Figures 1 and 2). Groundwater monitoring was performed at accessible monitor, extraction, and Orange County Water District (OCWD) test wells in September and December 2018 in general accordance with the monitoring schedule identified in the letter from Hargis + Associates, Inc. (H+A) to the California Regional Water Quality Control Board, Santa Ana Region (CRWQCB) dated November 8, 2002 (H+A, 2002).

GROUNDWATER MONITORING

Groundwater monitoring was conducted at the Site in September and December 2018 in general accordance with the existing schedule (H+A, 2002). Quarterly groundwater monitoring was not conducted in the first and second quarter 2018 due to remediation system inoperation related to planned treatment system upgrades and unplanned Trojan Ultraviolet (UV) System shutdowns. Groundwater monitoring conducted in September 2018 was comprised of water level measurements in accessible monitor and extraction wells and collection of groundwater samples in all accessible monitor and extraction wells (Tables 1 and 2).

GROUNDWATER LEVELS

Water levels were measured in accessible monitor wells, extraction wells, and two OCWD test wells in September and December 2018 (Table 1). Figures depicting water level elevations based on data obtained during annual monitoring conducted in September 2018 have been prepared (Figures 3 through 8). September 2018 water levels were used to prepare water level elevation figures representative of groundwater conditions.

The Site hydrostratigraphic units have been previously described in detail (H+A, 2013). Shallow zone and Upper Unit A water level data obtained in September 2018 indicate the same general patterns of hydraulic head and directions of groundwater flow that have been historically observed in these units prior to remediation system operations (Figures 3 through 5) (H+A, 1997). In September 2018, the direction of groundwater flow in the shallow zone was generally toward the east (Figure 3), and toward the

Other Offices:
Folsom, CA
Mesa, AZ
Tucson, AZ

Mr. Carl Bernhardt
January 30, 2019
Page 2

north-northeast in the deeper shallow zone (Figure 4). In September 2018, the direction of groundwater flow in the Upper Unit A was generally toward the Upper Unit A groundwater extraction wells (Figure 5).

Extraction of groundwater from Lower Unit A ceased in April 2004 with approval from CRWQCB (CRWQCB, 2004). In September 2018, the direction of groundwater flow in Lower Unit A was generally toward the north and northwest (Figure 6), which is consistent with the flow direction observed prior to remediation system operations (H+A, 1997). As discussed in the previous monitoring submittal, Lower Unit A water level variations and/or changes in the historical direction of groundwater flow in this unit may, in part, account for the detections of tetrachloroethylene (PCE) and trichloroethylene (TCE) in this unit in 2018 that are not attributable to the Site.

In September 2018, the direction of groundwater flow in the A/B aquitard was toward the southwest (Figure 7), which is consistent with the flow direction observed prior to remediation system operations (H+A, 1997). As discussed in the previous monitoring submittal, A/B aquitard water level variations and/or the change in the historical direction of groundwater flow in this unit may, in part, account for the detections of PCE and TCE in this unit that are not attributable to the Site (H+A, 2011, 2012, 2013, 2014, 2015, 2016, 2017, and 2018).

In September 2018, the direction of groundwater flow in Unit B was toward the southwest (Figure 8), which was consistent with the historical trends observed in this unit (H+A, 2013). As discussed in the previous monitoring submittal, the detections and concentration increases of PCE and TCE in this unit are not attributable to the Site.

GROUNDWATER CHEMICAL QUALITY

All groundwater samples collected during monitoring activities conducted in 2018 were analyzed by Eurofins Calscience Inc., Garden Grove, California or for volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (EPA) Method 8260B and for analysis of 1,4-dioxane by EPA Method 8270C MOD (Appendix A). TCE was the principal VOC detected in groundwater samples collected from extraction wells at the Site. Historically, other VOCs have been intermittently detected in groundwater samples collected from various wells at the Site (H+A, 1992). However, beginning in May 2005 and persisting to date at several locations, PCE and TCE have been detected in off-Site monitor wells at concentrations that are not consistent with historical groundwater concentration trends and observed water level elevation and gradient conditions associated with the respective wells. The lines of evidence that supported the conclusion that PCE and TCE concentrations in this area were increasing as a result of one or more off-Site, non-Raytheon source(s) of PCE and TCE to groundwater were previously described (H+A, 2013).

Chain-of-custody documentation was enclosed with each sample shipment. Quality assurance/quality control samples collected during monitoring in 2018 comprised trip blanks that accompanied each sample shipment, rinsate blanks, and field duplicates.

The principal VOC in groundwater is TCE (Table 2); PCE, 1,1-dichloroethylene (1,1-DCE), and all other detected compounds can be found in Table 3. Figures depicting the concentrations of TCE, PCE, and 1,1-DCE detected in groundwater samples collected in September 2018 have been prepared (Figures 9 through 18). Water quality hydrographs depicting the concentrations of TCE in extraction well groundwater samples obtained through September 2018 have been prepared (Figures 19 through 30). Comparisons of the historical concentrations of TCE with concentrations detected in September 2018 generally indicate stable or declining trends of TCE concentrations at the Site.



Mr. Carl Bernhardt
January 30, 2019
Page 3

GROUNDWATER REMEDIATION SYSTEM

The remediation system is a semi-automated, pump-and-treat system designed to remediate groundwater at the Site in the underlying hydrostratigraphic units identified as the shallow zone and Unit A.

The remediation system consists of the following major subsystems:

- Extraction/collection system;
- Treatment system;
- Disposal system;
- Treatment system utilities;
- Electrical system; and
- Control system.

The extraction/collection system is used to extract groundwater from the shallow zone and Unit A, and convey the extracted groundwater to the treatment system. The treatment system is used to reduce the concentration of TCE in the extracted groundwater to meet treatment objectives using liquid phase carbon adsorption. The disposal system is used to convey and dispose of the treated groundwater into the subsurface using injection wells screened in both Upper and Lower Unit A. Treatment system utilities are provided to treat water generated during non-routine operations. An electrical system is provided to distribute power to the remediation system components. A control system regulates the operation of the major subsystems using microprocessor-based controllers.

The groundwater remediation system did not operate from January 2, 2018 through March 20, 2018 to allow for a planned upgrade of the control system and completion of long-term maintenance tasks on the extraction/collection, treatment, and disposal systems.

Full-scale groundwater remediation commenced March 12, 1996. Groundwater historically has been extracted from the Shallow Zone, Upper Unit A, and Lower Unit A. In April 2004, groundwater extraction from Lower Unit A was discontinued, as approved by the CRWQCB (CRWQCB, 2004).

During the period January 1, 2018 through December 31, 2018, the groundwater remediation system treated approximately 58,179,009 gallons of water and removed approximately 1.6 gallons of TCE. TCE concentrations detected in groundwater samples collected from extraction wells are summarized in Figures 19 through 30. Through December 2018, the full-scale remediation system has treated approximately 1,621,796,292 gallons of water and removed approximately 114 gallons of TCE.

SOIL VAPOR EXTRACTION SYSTEM

The SVE system is designed to treat VOCs in soil vapor, primarily TCE, which is extracted from two dual-nested SVE wells SVE-100S/D and SVE-101S/D. These two nested sets of SVE wells both have well screens that were installed at an angle of approximately 45-degrees from horizontal. Each nested SVE well has a shallow screened interval from approximately 5 to 25 feet below land surface (bls) and a deeper screened interval from approximately 25 to 50 feet bls. The trace of the SVE well screens in a horizontal plane projected onto land surface is illustrated on Figure 31. Treated soil vapors are discharged through a 35-foot stack which is regulated by the South Coast Air Quality Management District (SCAQMD) (Permit G37741, A/N 577664). Inside the enclosure, operational components include:

- two 1,000-pound vapor phase granular activated carbon adsorption vessels (2 vessels operated in series) with a 35-foot tall exhaust stack;

Mr. Carl Bernhardt
January 30, 2019
Page 4

- one 250 standard cubic feet per minute (10 horsepower [hp]) positive displacement blower;
- an airstream heat exchanger with 1 hp cooling fan;
- one 81-gallon vapor-liquid separator (knock-out pot);
- a 5 gallon per minute transfer pump (1/2 hp);
- a 550-gallon condensate water storage tank;
- conveyance pipelines; and
- miscellaneous instrumentation and controls.

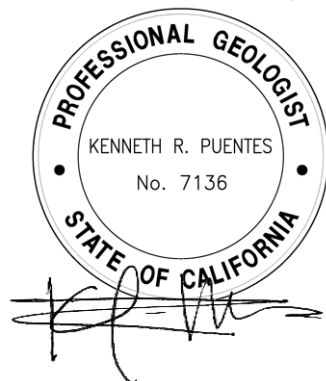
From January 1, 2015 through April 28, 2015, the SVE system remained non-operational due to an impending permit modification through SCAQMD. At the direction of SCAQMD, an application for a modification of the previous permit was submitted and on February 20, 2015, SCAQMD subsequently issued the modified second operational permit G34754, A/N 571829. In April 2015, startup operations under this modified second permit resumed and lasted until July 2015, until terminated due to permit condition related issues. A final permit modification was submitted in August 2015, and SCAQMD subsequently issued the modified third and current operational permit G37741, A/N 577664. The system was then restarted November 5, 2015.

During the period January 1, 2018 through December 31, 2018, the SVE system removed approximately 5.6 pounds of total VOCs and approximately 5.3 pounds of TCE (Table 4; Figure 32). In addition, system influent, effluent, and midpoint field samples were collected weekly at the SVE System and analyzed in the field using a calibrated flame-ionization detector (FID) or calibrated photo-ionization detector (PID). Weekly FID or PID measurements collected at the system were used to verify that the SCAQMD permit limits were not exceeded and, if necessary, operational adjustments were made to remain in permit compliance.

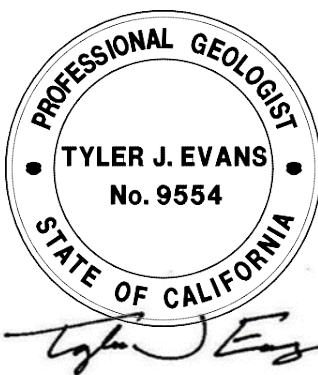
Please contact me at (858) 455-6500, extension 102, or kpuentes@hargis.com, with any questions or comments.

Sincerely,

HARGIS + ASSOCIATES, INC



Kenneth R. Puentes, PG 7136, CHG 714
Principal Hydrogeologist



Tyler J. Evans, PG 9554
Hydrogeologist

KRP/TJE/mlm



HARGIS + ASSOCIATES, INC.

Mr. Carl Bernhardt
January 30, 2019
Page 5

Enclosures: Tables 1 through 4
Figures 1 through 32
Appendix A – Laboratory Analytical Data (*Provided on CD*)

cc (w/encl.) Mr. Paul Brewer, Raytheon Company (4 hard copies via Federal Express Standard)

764_2019_H01_02_2018_AnnMonRpt

Mr. Carl Bernhardt
January 30, 2019
Page 6

REFERENCES

- California Regional Water Quality Control Board (CRWQCB), 2004. Letter to P. Brewer, Raytheon Systems Company, from C. Bernhardt, RWQCB, re: Proposed Groundwater Monitoring Well Construction and Destruction, Former Raytheon Facility, 651 North Gilbert Street, Fullerton, California, Regional Board Case Number: 083000187T, dated March 12, 2004.
- Hargis + Associates, Inc., 1992. Phase V Groundwater Assessment, Hughes Aircraft Company, Building 684, Fullerton, California. Prepared for Hughes Aircraft Company (HAC), Fullerton, California. September 14, 1992.
- _____, 1997. Results of Groundwater Monitoring and Groundwater Remediation System Operation, March through December 1996, Hughes Aircraft Company, Building 684, Fullerton, California. March 26, 1997.
- _____, 2002. Letter to Mr. Carl A. Bernhardt California Regional Water Quality Control Board, re: Proposed Groundwater Monitoring Program, Hughes Aircraft Company, Building 684, Fullerton, California, dated November 8, 2002.
- _____, 2011. Results of Groundwater Monitoring and Groundwater Remediation System Operation, January through December 2010, Raytheon Company, Former Building 684, Fullerton, California. February 18, 2011.
- _____, 2012. Results of Groundwater Monitoring and Groundwater Remediation System Operation, January through December 2011, Raytheon Company, Former Building 684, Fullerton, California. January 31, 2012.
- _____, 2013. Results of Groundwater Monitoring and Groundwater Remediation System Operation, January through December 2012, Raytheon Company, Former Building 684, Fullerton, California. February 14, 2013.
- _____, 2014. 2013 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. February 13, 2014.
- _____, 2015. 2014 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. February 11, 2015.
- _____, 2016. 2015 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. May 17, 2016.
- _____, 2017. 2016 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. February 24, 2017.



Mr. Carl Bernhardt
January 30, 2019
Page 7

_____, 2018. 2017 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. March 21, 2018.

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Shallow Zone Water Table Monitor Wells				
S-02	09/18/18	100.91	53.95	46.96
S-02	12/19/18	100.91	54.43	46.48
S-03	09/18/18	101.60	55.92	45.68
S-03	12/19/18	101.60	56.54	45.06
S-04	09/18/18	100.95	55.95	45.00
S-04	12/19/18	100.95	56.57	44.38
S-05	09/18/18	98.92	DRY @ 47.81	--
S-05	12/19/18	98.92	DRY @ 47.81	--
S-07	09/18/18	99.48	50.32	49.16
S-07	12/19/18	99.48	50.73	48.75
S-08	09/18/18	95.52	51.46	44.06
S-08	12/19/18	95.52	51.97	43.55
S-18	09/18/18	98.79	50.13	48.66
S-18	12/19/18	98.79	50.55	48.24
S-21	09/18/18	95.81	DRY @ 41.25	--
S-21	12/19/18	95.81	DRY @ 39.70	--
S-32	09/18/18	101.17	55.95	45.22
S-32	12/19/18	101.17	56.57	44.60
Deeper Shallow Zone Monitor Wells				
S-14	09/18/18	96.96	47.98	48.98
S-14	12/19/18	96.96	48.30	48.66
S-15	09/18/18	95.76	43.08	52.68
S-15	12/19/18	95.76	43.47	52.29

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Deeper Shallow Zone Monitor Wells (continued)				
S-24	09/18/18	95.66	43.40	52.26
S-24	12/19/18	95.66	43.84	51.82
S-26	09/18/18	97.68	42.66	55.02
S-26	12/19/18	97.68	43.02	54.66
S-27	09/18/18	119.98	76.34	43.64
S-27	12/19/18	119.98	76.71	43.27
S-29	09/18/18	91.42	38.41	53.01
S-29	12/19/18	91.42	38.86	52.56
S-30	09/18/18	95.00	41.91	53.09
S-30	12/19/18	95.00	42.24	52.76
S-31	09/18/18	94.31	42.12	52.19
S-31	12/19/18	94.31	42.58	51.73
SE-01	09/18/18	98.27	53.50	44.77
SE-01	12/19/18	98.27	53.90	44.37
Shallow Zone Extraction Wells				
SE-04	09/18/18	95.53	42.30	53.23
SE-04	12/19/18	95.53	42.73	52.80
Upper Unit A Monitor Wells				
UA-02	09/18/18	98.82	55.60	43.22
UA-02	12/19/18	98.82	55.76	43.06
UA-06	09/18/18	97.53	54.08	43.45
UA-06	12/19/18	97.53	54.01	43.52
UA-07	09/18/18	98.61	54.21	44.40
UA-07	12/19/18	98.61	54.31	44.30

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Upper Unit A Monitor Wells (continued)				
UA-08	09/18/18	95.05	52.19	42.86
UA-08	12/19/18	95.05	52.21	42.84
UA-11	09/18/18	94.89	51.76	43.13
UA-11	12/19/18	94.89	51.79	43.10
UA-12	09/18/18	91.07	48.12	42.95
UA-12	12/19/18	91.07	48.13	42.94
Upper Unit A Extraction Wells				
UAX-01	09/18/18	97.45	65.81	31.64
UAX-01	12/19/18	97.45	60.56	36.89
UAX-02	09/18/18	97.08	79.75	17.33
UAX-02	12/19/18	97.08	81.15	15.93
UAX-03	09/18/18	92.63	77.68	14.95
UAX-03	12/19/18	92.63	77.23	15.40
Lower Unit A Monitor Wells				
UA-04D	09/18/18	100.31	56.10	44.21
UA-04D	12/19/18	100.31	56.12	44.19
UA-06D	09/18/18	97.45	52.97	44.48
UA-06D	12/19/18	97.45	52.74	44.71
UA-07D	09/18/18	99.46	53.36	46.10
UA-07D	12/19/18	99.46	53.06	46.40
UA-08D	09/18/18	94.86	51.13	43.73
UA-08D	12/19/18	94.86	51.03	43.83
UA-10D	09/18/18	93.89	49.28	44.61
UA-10D	12/19/18	93.89	48.82	45.07

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Lower Unit A Monitor Wells (continued)				
UA-11D	09/18/18	94.35	50.37	43.98
UA-11D	12/19/18	94.35	50.12	44.23
UA-12D	09/18/18	90.57	47.21	43.36
UA-12D	12/19/18	90.57	47.11	43.46
UA-13D	09/18/18	91.28	46.83	44.45
UA-13D	12/19/18	91.28	45.82	45.46
UA-14D	09/18/18	91.08	47.31	43.77
UA-14D	12/19/18	91.08	46.95	44.13
UA-15D	09/18/18	95.69	52.61	43.08
UA-15D	12/19/18	95.69	52.73	42.96
UA-16D	09/18/18	93.86	49.75	44.11
UA-16D	12/19/18	93.86	49.23	44.63
UA-17D	09/18/18	93.89	49.78	44.11
UA-17D	12/19/18	93.89	49.27	44.62
Lower Unit A Extraction Wells				
LAX-01	09/18/18	88.77	44.69	44.08
LAX-01	12/20/18	88.77	44.36	44.41
LAX-02	09/18/18	96.18	52.22	43.96
LAX-02	12/19/18	96.18	52.07	44.11
LAX-03	09/18/18	96.66	52.88	43.78
LAX-03	12/19/18	96.66	52.97	43.69
A/B Aquitard Monitor Wells				
AB-01	09/18/18	97.24	52.62	44.62
AB-01	12/19/18	97.24	52.25	44.99

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
A/B Aquitard Monitor Wells (continued)				
AB-02	09/18/18	96.29	51.45	44.84
AB-02	12/19/18	96.29	51.29	45.00
AB-03	09/18/18	96.64	51.87	44.77
AB-03	12/19/18	96.64	51.93	44.71
AB-05	09/18/18	90.99	47.05	43.94
AB-05	12/19/18	90.99	46.04	44.95
AB-06	09/18/18	93.67	49.48	44.19
AB-06	12/19/18	93.67	48.73	44.94
AB-07	09/18/18	90.62	47.36	43.26
AB-07	12/19/18	90.62	46.71	43.91
AB-08	09/18/18	93.92	50.15	43.77
AB-08	12/19/18	93.92	49.39	44.53
Unit B Monitor Wells				
UB-01	09/18/18	100.47	56.18	44.29
UB-01	12/19/18	100.47	55.24	45.23
UB-02	09/18/18	91.38	49.92	41.46
UB-02	12/19/18	91.38	48.32	43.06
UB-03	09/18/18	94.94	52.47	42.47
UB-03	12/19/18	94.94	51.35	43.59
UB-04	09/18/18	94.00	51.12	42.88
UB-04	12/19/18	94.00	49.97	44.03
UB-05	09/18/18	90.59	48.44	42.15
UB-05	12/19/18	90.59	47.28	43.31

TABLE 1**WATER LEVEL ELEVATION DATA**

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Unit B Monitor Wells (continued)				
UB-06	09/18/18	93.83	51.55	42.28
UB-06	12/19/18	93.83	50.25	43.58
Orange County Water District Test Wells				
36A6-255	09/18/18	92.09	50.50	41.59
36A6-255	12/19/18	92.09	49.15	42.94
36A6-855	09/18/18	92.09	86.75	5.34
36A6-855	12/19/18	92.09	74.12	17.97

FOOTNOTES

msl = Mean sea level

bmp = Below measuring point

UTM = Unable to measure

TABLE 2
TRICHLOROETHYLENE IN GROUNDWATER SAMPLES

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	CONCENTRATION (ug/l)
Shallow Zone Water Table Monitor Wells			
SE-01	09/19/18	ORG	6,900
S-02	09/18/18	ORG	5.3
S-03	09/18/18	ORG	2.7
S-04	09/19/18	ORG	36
S-05	--	--	NS
S-07	09/19/18	ORG	0.36 J
S-08	09/19/18	ORG	2,400
S-08	09/19/18	FD	2,000
S-21	--	--	NS
S-32	09/18/18	ORG	52
Deeper Shallow Zone Monitor Wells			
S-14	09/19/18	ORG	1
S-15	09/18/18	ORG	2.1
S-18	09/18/18	ORG	0.78 J
S-24	09/18/18	ORG	5.3
S-26	09/19/18	ORG	0.37 J
S-27	09/19/18	ORG	<1.0
S-29	09/18/18	ORG	<1.0
S-30	09/18/18	ORG	<1.0
S-31	09/19/18	ORG	<1.0
Shallow Zone Extraction Well			
SE-04	--	--	NS
Shallow Zone Horizontal Extraction Wells			
HEW-01	09/18/18	ORG	640
HEW-01	12/19/18	ORG	760
HEW-02	09/20/18	ORG	150
HEW-02	12/20/18	ORG	170
HEW-03	09/19/18	ORG	110
HEW-03	12/19/18	ORG	120
HEW-04	09/18/18	ORG	160
HEW-04	09/18/18	FD	150
HEW-04	12/19/18	ORG	160
HEW-05	09/20/18	ORG	180
HEW-05	09/20/18	FD	180
HEW-05	12/20/18	ORG	140
Upper Unit A Monitor Wells			
UA-02	09/19/18	ORG	6.3
UA-06	09/19/18	ORG	6.7
UA-07	09/18/18	ORG	2.1
UA-08	09/18/18	ORG	4.6
UA-11	09/18/18	ORG	0.92 J
UA-12	09/18/18	ORG	0.37 J

TABLE 2
TRICHLOROETHYLENE IN GROUNDWATER SAMPLES

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	CONCENTRATION (ug/l)
Upper Unit A Extraction Wells			
UAX-01	09/18/18	ORG	3.7
UAX-01	12/19/18	ORG	3.7
UAX-02	09/19/18	ORG	4.5
UAX-02	09/19/18	FD	4.6
UAX-02	12/19/18	ORG	4.8
UAX-02	12/19/18	FD	4.5
UAX-03	09/18/18	ORG	12
UAX-03	12/19/18	ORG	11
Lower Unit A Monitor Wells			
UA-04D	09/18/18	ORG	0.39 J
UA-06D	09/19/18	ORG	0.67 J
UA-07D	09/18/18	ORG	<1.0
UA-08D	09/18/18	ORG	2.5
UA-10D	09/18/18	ORG	0.42 J
UA-11D	09/18/18	ORG	1.2
UA-12D	09/18/18	ORG	<1.0
UA-13D	09/18/18	ORG	<1.0
UA-14D	09/18/18	ORG	1.6
UA-14D	09/18/18	FD	0.82 J
UA-15D	09/18/18	ORG	1.5
UA-16D	09/18/18	ORG	<1.0
UA-17D	09/18/18	ORG	<1.0
Lower Unit A Extraction Wells			
LAX-01	09/18/18	ORG	<1.0
LAX-01	12/20/18	ORG	<1.0
LAX-02	09/18/18	ORG	<1.0
LAX-02	12/19/18	ORG	<1.0
LAX-03	09/19/18	ORG	0.51 J
LAX-03	12/19/18	ORG	<1.0
Unit A Injection Wells			
UAI-01	--	--	NS
UAI-02	--	--	NS
UAI-03	--	--	NS
UAI-04	--	--	NS
UAI-05	--	--	NS
A/B Aquitard Monitor Wells			
AB-01	09/19/18	ORG	<1.0
AB-02	09/18/18	ORG	13
AB-03	09/19/18	ORG	0.44 J
AB-05	09/18/18	ORG	<1.0
AB-06	09/18/18	ORG	0.42 J
AB-07	09/18/18	ORG	5.4
AB-08	09/18/18	ORG	<1.0

TABLE 2
TRICHLOROETHYLENE IN GROUNDWATER SAMPLES

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	CONCENTRATION (ug/l)
Unit B Monitor Wells			
UB-01	09/19/18	ORG	<1.0
UB-02	09/18/18	ORG	<1.0
UB-03	09/19/18	ORG	2.1
UB-04	09/18/18	ORG	9.6
UB-05	09/18/18	ORG	<1.0
UB-06	09/18/18	ORG	4.5
Quality Assurance/Quality Control Samples			
TB-091818	09/18/18	TB	<1.0
TB-091918	09/19/18	TB	<1.0
TB-092018	09/20/18	TB	<1.0
TB-121918	12/19/18	TB	<1.0
RB-091818A	09/18/18	RB	<1.0
RB-091818B	09/18/18	RB	<1.0
RB-091818C	09/18/18	RB	<1.0
RB-091918A	09/19/18	RB	<1.0
RB-091918B	09/19/18	RB	<1.0
RB-121918	12/19/18	RB	<1.0

FOOTNOTES

(<) = Less than; numerical value is the Reporting Limit for Trichloroethylene
 FD = Field duplicate sample
 NS = Not sampled
 ORG = Original sample
 RB = Rinsate blank sample
 TB = Trip blank sample
 ug/l = Micrograms per liter
 J= Estimated Value

TABLE 3
**OTHER VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER SAMPLES**

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	COMPOUND	CONCENTRATION (ug/l)
Shallow Zone Water Table Monitor Wells				
SE-01	09/19/18	ORG	Tetrachloroethene	170
S-04	09/19/18	ORG	Tetrachloroethene	0.54 J
S-08	09/19/18	ORG	Tetrachloroethene	60
S-08	09/19/18	FD	Tetrachloroethene	48
S-32	09/18/18	ORG	Tetrachloroethene	1
Deeper Shallow Zone Monitor Wells				
S-15	09/18/18	ORG	1,1-Dichloroethene	0.34 J
S-24	09/18/18	ORG	Acetone	18 J
S-26	09/19/18	ORG	Acetone	12 J
S-27	09/19/18	ORG	Acetone	16 J
S-30	09/18/18	ORG	Tetrachloroethene	1.2
S-31	09/19/18	ORG	Acetone	14 J
Shallow Zone Horizontal Extraction Wells				
HEW-01	09/18/18	ORG	1,1-Dichloroethene	6.3
HEW-01	09/18/18	ORG	Tetrachloroethene	6.5
HEW-01	09/18/18	ORG	1,4-Dioxane	1.9
HEW-01	12/19/18	ORG	1,1-Dichloroethene	4.2 J
HEW-01	12/19/18	ORG	Tetrachloroethene	8.8
HEW-01	12/19/18	ORG	1,4-Dioxane	1.6
HEW-02	09/20/18	ORG	1,1-Dichloroethene	0.51 J
HEW-02	09/20/18	ORG	Tetrachloroethene	0.42 J
HEW-02	12/20/18	ORG	1,1-Dichloroethene	0.48 J
HEW-02	12/20/18	ORG	1,4-Dioxane	1.20
HEW-03	09/19/18	ORG	1,1-Dichloroethene	2.1
HEW-03	09/19/18	ORG	Tetrachloroethene	1.7
HEW-03	12/19/18	ORG	1,1-Dichloroethene	2.1
HEW-03	12/19/18	ORG	Tetrachloroethene	1.7
HEW-03	12/19/18	ORG	1,4-Dioxane	4.9
HEW-04	09/18/18	ORG	1,1-Dichloroethene	1.7
HEW-04	09/18/18	FD	1,1-Dichloroethene	1.5
HEW-04	09/18/18	ORG	Tetrachloroethene	2.1
HEW-04	09/18/18	FD	Tetrachloroethene	1.7
HEW-04	09/18/18	ORG	1,4-Dioxane	3.2
HEW-04	09/18/18	FD	1,4-Dioxane	3.7
HEW-04	12/19/18	ORG	1,1-Dichloroethene	1.5
HEW-04	12/19/18	ORG	Tetrachloroethene	1.6
HEW-04	12/19/18	ORG	1,4-Dioxane	6.4
HEW-05	09/20/18	ORG	c-1,2-Dichloroethene	0.47 J
HEW-05	09/20/18	FD	c-1,2-Dichloroethene	0.94 J
HEW-05	12/20/18	ORG	1,4-Dioxane	0.43 J

TABLE 3
**OTHER VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER SAMPLES**

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	COMPOUND	CONCENTRATION (ug/l)
Upper Unit A Monitor Wells				
UA-02	09/19/18	ORG	1,1-Dichloroethene	0.84 J
UA-06	09/19/18	ORG	1,1-Dichloroethene	0.41 J
UA-06	09/19/18	ORG	c-1,2-Dichloroethene	0.46 J
UA-06	09/19/18	ORG	Tetrachloroethene	3.1
UA-07	09/18/18	ORG	1,1-Dichloroethane	1.9
UA-08	09/18/18	ORG	1,1-Dichloroethene	0.41 J
UA-11	09/18/18	ORG	Tetrachloroethene	4.1
UA-12	09/18/18	ORG	Tetrachloroethene	0.90 J
Upper Unit A Extraction Wells				
UAX-01	09/18/18	ORG	1,1-Dichloroethene	4.9
UAX-01	09/18/18	ORG	1,4-Dioxane	0.54
UAX-01	12/19/18	ORG	1,1-Dichloroethene	3.8
UAX-02	09/19/18	ORG	1,1-Dichloroethene	5
UAX-02	09/19/18	FD	1,1-Dichloroethene	4.9
UAX-02	09/19/18	ORG	1,4-Dioxane	1.3
UAX-02	09/19/18	FD	1,4-Dioxane	1.1
UAX-02	12/19/18	ORG	1,1-Dichloroethene	4.3
UAX-02	12/19/18	FD	1,1-Dichloroethene	4.4
UAX-02	12/19/18	ORG	1,4-Dioxane	1.7
UAX-02	12/19/18	FD	1,4-Dioxane	1.3
UAX-03	09/18/18	ORG	Acetone	16 J
UAX-03	09/18/18	ORG	1,1-Dichloroethene	0.76 J
UAX-03	12/19/18	ORG	1,1-Dichloroethene	0.68 J
Lower Unit A Monitor Wells				
UA-04D	09/18/18	ORG	Acetone	12 J
UA-06D	09/19/18	ORG	Tetrachloroethene	3.3
UA-07D	09/18/18	ORG	1,1-Dichloroethane	0.54 J
UA-07D	09/18/18	ORG	Tetrachloroethene	0.80 J
UA-10D	09/18/18	ORG	Tetrachloroethene	8.3
UA-11D	09/18/18	ORG	Tetrachloroethene	0.53 J
UA-12D	09/18/18	ORG	Tetrachloroethene	0.73 J
UA-14D	09/18/18	ORG	Tetrachloroethene	25
UA-14D	09/18/18	FD	Acetone	13 J
UA-14D	09/18/18	FD	Tetrachloroethene	42
UA-15D	09/18/18	ORG	Acetone	12 J
UA-15D	09/18/18	ORG	1,1-Dichloroethene	0.44 J
UA-16D	09/18/18	ORG	Tetrachloroethene	0.77 J
UA-17D	09/18/18	ORG	Acetone	10 J
UA-17D	09/18/18	ORG	Carbon Disulfide	1.3 J
UA-17D	09/18/18	ORG	Methyl-t-Butyl Ether (MTBE)	1.7

TABLE 3
**OTHER VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER SAMPLES**

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	COMPOUND	CONCENTRATION (ug/l)
Lower Unit A Extraction Wells				
LAX-01	09/18/18	ORG	Acetone	20 J
A/B Aquitard Monitor Wells				
AB-01	09/19/18	ORG	Acetone	20
AB-02	09/18/18	ORG	Carbon Disulfide	0.92 J
AB-02	09/18/18	ORG	c-1,2-Dichloroethene	4.6
AB-02	09/18/18	ORG	t-1,2-Dichloroethene	13
AB-02	09/18/18	ORG	Tetrachloroethene	1.5
AB-05	09/18/18	ORG	Acetone	18 J
AB-06	09/18/18	ORG	c-1,2-Dichloroethene	2.9
AB-07	09/18/18	ORG	Acetone	18 J
AB-07	09/18/18	ORG	c-1,2-Dichloroethene	2.8
AB-07	09/18/18	ORG	t-1,2-Dichloroethene	2.7
AB-07	09/18/18	ORG	Isopropylbenzene	0.27 J
AB-07	09/18/18	ORG	Tetrachloroethene	8.7
AB-08	09/18/18	ORG	c-1,2-Dichloroethene	1.7
Unit B Monitor Wells				
UB-02	09/18/18	ORG	Acetone	14 J
UB-03	09/19/18	ORG	c-1,2-Dichloroethene	5.6
UB-03	09/19/18	ORG	t-1,2-Dichloroethene	9.6
UB-03	09/19/18	ORG	Tetrachloroethene	2.2
UB-04	09/18/18	ORG	c-1,2-Dichloroethene	0.90 J
UB-04	09/18/18	ORG	t-1,2-Dichloroethene	2.2
UB-04	09/18/18	ORG	Tetrachloroethene	0.71 J
UB-05	09/18/18	ORG	Acetone	15 J
UB-05	09/18/18	ORG	c-1,2-Dichloroethene	1
UB-05	09/18/18	ORG	Tetrachloroethene	0.37 J
UB-06	09/18/18	ORG	Acetone	13 J
Quality Assurance/Quality Control Samples				
RB-091818B	09/18/18	RB	Acetone	15 J
RB-091818C	09/18/18	RB	Acetone	18 J

FOOTNOTES

FD = Field duplicate sample
 ORG = Original sample
 ug/l = Micrograms per liter
 J = Estimated Value
 RB = Rinsate blank sample
 TB = Trip blank sample
 E = Data qualified as estimated in accordance with quality control criteria

TABLE 4 - SYSTEM CALCULATIONS
Soil Vapor Extraction (SVE) System

Sample Date	Volume Soil Gas Extracted				Mass Removed			
	Average Flowrate		Hours Operated	Volume Air Extracted	Monthly Mass of Total VOCs Removed	Cumulative Mass of Total VOCs Removed	Monthly Mass TCE Removed	Cumulative Mass TCE Removed
	scfm	m ³ /hr	hr	m ³	lb/month	lb	lb/month	lb
12/03/14	60.0	101.9	168.4	17,166.8	1.3	1.3	1.1	1.1
04/30/15	60.0	101.9	29.9	3,048.0	1.0	2.4	0.9	2.0
05/14/15	67.0	113.8	696.6	79,296.5	25.0	27.4	22.5	24.5
06/25/15	25.0	42.5	683.5	29,031.8	21.6	48.9	19.9	44.4
07/23/15	25.0	42.5	669.0	28,415.9	13.6	62.6	12.4	56.9
11/12/15	128.1	217.7	340.0	74,023.4	36.7	99.2	34.2	91.0
12/17/15	141.6	240.6	517.0	124,379.8	24.3	123.5	23.6	114.6
01/21/16	141.0	239.6	168.4	40,342.0	2.5	126.0	2.3	116.9
02/18/16	96.0	163.1	390.6	63,708.8	3.2	129.2	3.0	120.0
03/17/16	113.2	192.3	583.1	112,113.4	5.6	134.8	5.2	125.1
04/21/16	150.0	254.9	669.4	170,597.6	10.1	144.9	9.5	134.6
05/19/16	166.8	283.3	668.2	189,307.7	6.7	151.6	6.5	141.1
06/23/16	133.4	226.6	509.7	115,522.5	3.4	154.9	3.3	144.4
07/21/16	159.0	270.1	673.6	181,968.0	3.4	158.3	3.2	147.6
08/18/16	153.8	261.2	671.3	175,358.9	3.8	162.1	3.5	151.2
09/15/16	150.0	254.9	672.6	171,413.1	2.9	165.0	2.8	154.0
10/06/16	151.8	257.8	188.0	48,471.1	3.7	168.7	0.6	154.6
11/17/16	155.5	264.2	458.0	121,001.8	2.3	171.0	2.1	156.8
12/08/16	139.8	237.5	887.0	210,681.7	2.1	173.1	1.9	158.7
01/19/17	142.5	242.1	528.0	127,833.5	1.3	174.3	1.2	159.9
02/09/17	147.5	250.6	490.0	122,795.9	1.5	175.9	1.5	161.3
03/09/17	141.4	240.2	683.0	164,083.9	1.7	177.5	1.6	162.9
04/13/17	137.5	233.6	694.0	162,128.0	2.0	179.5	1.9	164.9
05/18/17	141.3	240.0	672.0	161,270.0	1.8	181.3	1.7	166.6
06/15/17	141.0	239.6	846.0	202,668.1	2.0	183.3	1.9	168.5
07/27/17	150.0	254.9	164.4	41,897.6	0.7	184.0	0.6	169.2
08/09/17	133.0	226.0	835.5	188,796.5	1.4	185.5	1.3	170.5
09/20/17	130.0	220.9	600.2	132,567.0	1.2	186.6	1.1	171.6
10/19/17	130.0	220.9	717.9	158,563.5	1.4	188.0	1.3	172.9
11/16/17	128.0	217.5	750.0	163,105.0	0.7	188.7	0.6	173.5
12/14/17	113.0	192.0	542.2	104,096.0	0.5	189.2	0.4	173.9
01/18/18	125.0	212.4	664.8	141,187.7	0.6	189.7	0.5	174.5
02/15/18	99.5	169.1	499.0	84,356.7	0.3	190.0	0.3	174.7
03/22/18	97.8	166.2	665.9	110,648.1	0.4	190.5	0.4	175.1
04/12/18	108.0	183.5	683.0	125,325.8	0.6	191.1	0.6	175.7
05/10/18	112.0	190.3	688.5	131,014.1	0.6	191.7	0.6	176.3
06/14/18	103.8	176.3	670.5	118,190.6	0.4	192.1	0.4	176.6
07/12/18	102.6	174.3	604.5	105,375.5	0.4	192.5	0.4	177.0
08/09/18	99.0	168.2	843.5	141,878.4	0.5	193.0	0.5	177.5
09/20/18	98.6	167.5	667.0	111,737.4	0.5	193.5	0.5	178.0
10/11/18	106.6	181.1	671.0	121,527.8	0.5	194.0	0.5	178.5
11/01/18	99.7	169.3	830.7	140,666.3	0.5	194.6	0.5	179.0
12/06/18	98.6	167.5	654.4	109,626.6	0.2	194.8	0.2	179.2

FOOTNOTES

scfm = Standard cubic feet per minute

 m³/hr = Cubic meter per hour

lb = Pound

VOCs = Volatile organic compounds

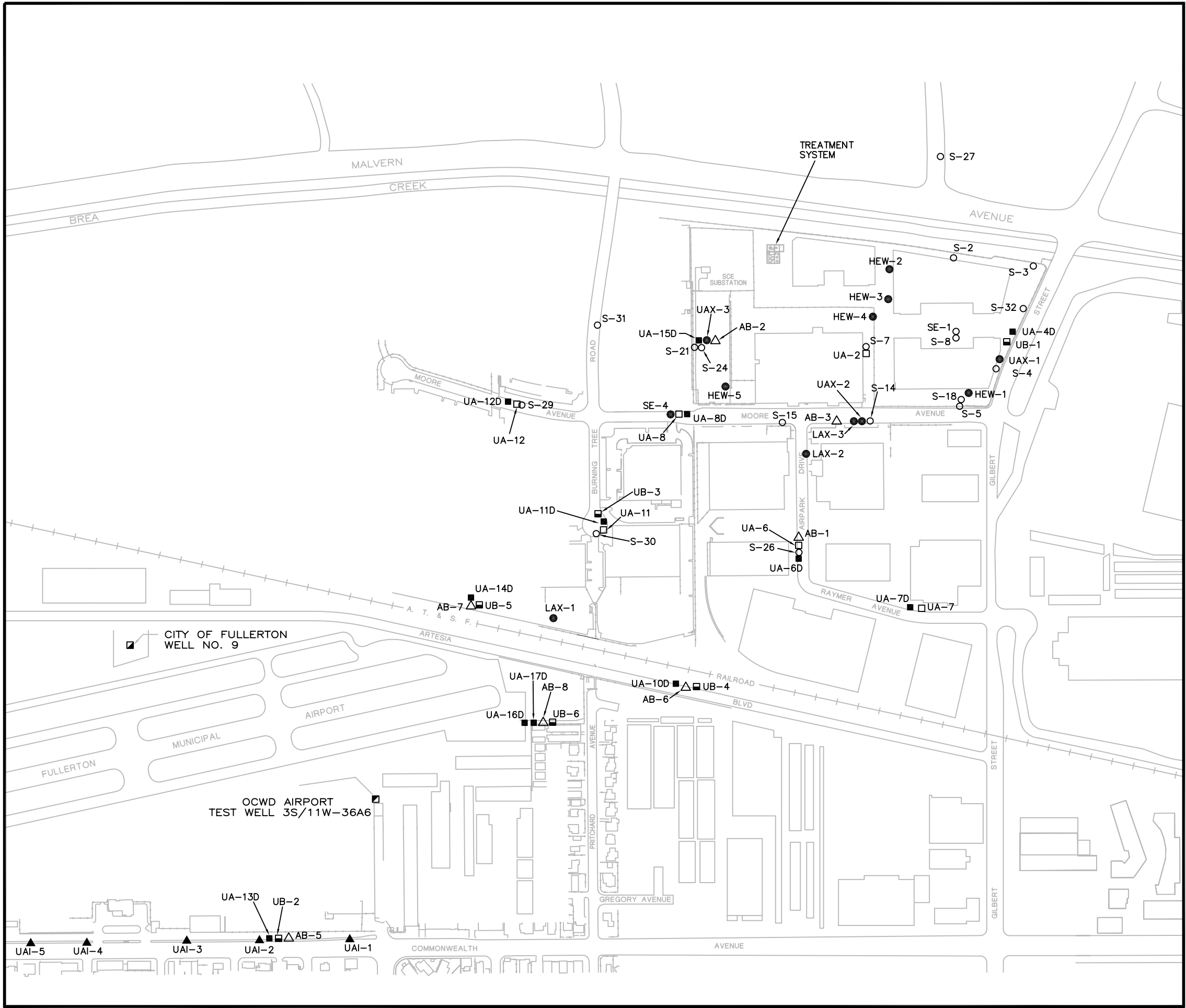
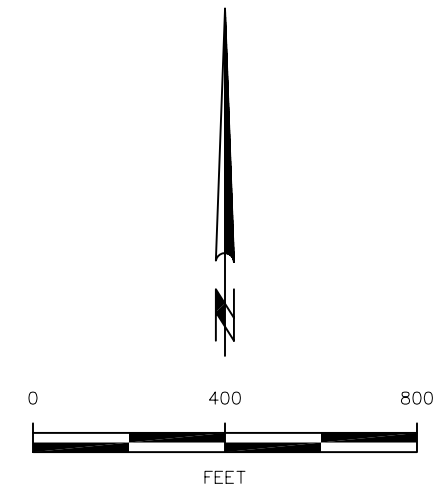
TCE = Trichloroethylene



FIGURE 1. SITE LOCATION

EXPLANATION

- S-29 APPROXIMATE LOCATION OF SHALLOW ZONE MONITOR WELL
- HEW-1 APPROXIMATE LOCATION OF EXTRACTION WELL FOR REMEDIATION SYSTEM
- UA-12 APPROXIMATE LOCATION OF UPPER UNIT A MONITOR WELL
- UA-12D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- AB-7 APPROXIMATE LOCATION OF A/B AQUITARD MONITOR WELL
- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- AT & SF RAILROAD



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

WELL LOCATIONS

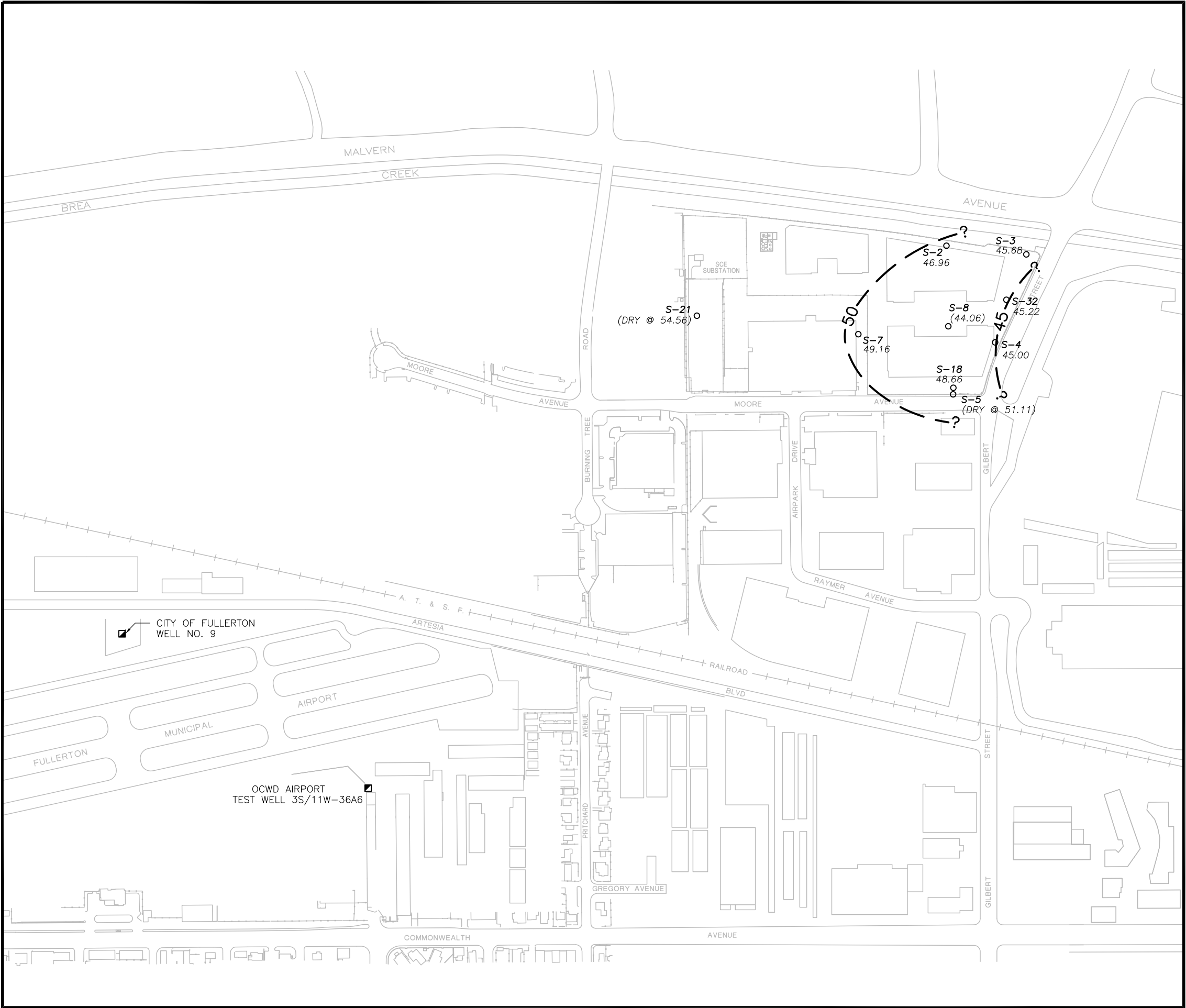
HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

11/05

FIGURE 2

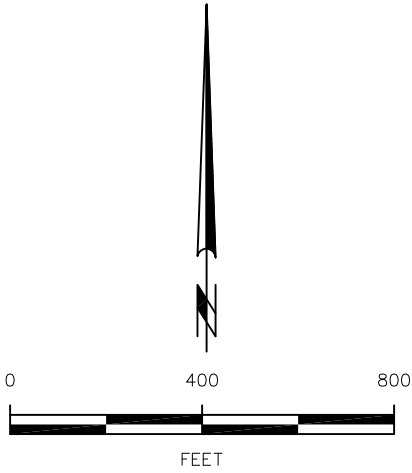
PREP BY KSS REV BY KRP RPT NO. 764.11 410-5052 B

Jan 28, 2019 -- 4:08pm ESS -- T:\2019\700-799\764 Raytheon\Hydrogeology\Water Lvl\220-2461.dwg



EXPLANATION

- S-7 APPROXIMATE LOCATION OF SHALLOW ZONE WATER TABLE MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- S-8 44.06 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- () NOT CONTOURED
- AT & SF RAILROAD
- ? --- 50 --- ? CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- NOTE: WATER LEVELS MEASURED SEPTEMBER 18, 2018



RAYTHEON COMPANY

FULLERTON, CALIFORNIA

WATER LEVEL ELEVATIONS
SHALLOW ZONE WATER TABLE
SEPTEMBER 2018

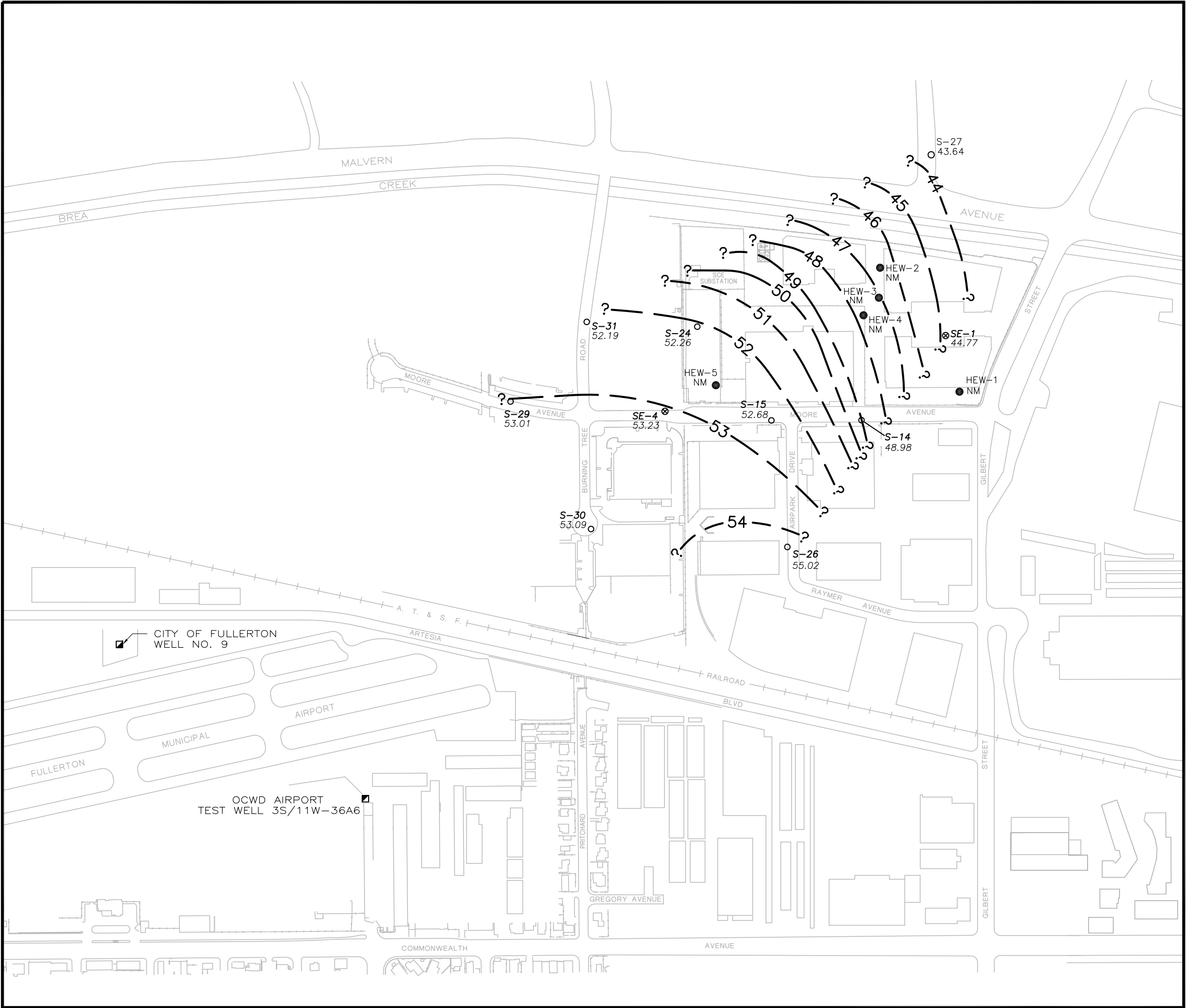
 HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 3

PREP BY AMJ REV BY TJE RPT NO. 764.10 220-2461 A

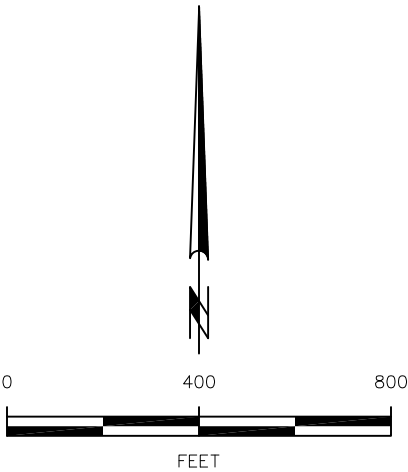
Jan 17, 2019 - 12:57pm ESS - T:\2019\700-799\764_Raytheon\Hydrogeology\Water Lv\220-2462.dwg



EXPLANATION

- S-29 ○ APPROXIMATE LOCATION OF DEEPER SHALLOW ZONE MONITOR WELL
- SE-1 ⊗ APPROXIMATE LOCATION OF DEEPER SHALLOW ZONE EXTRACTION WELL
- HEW-1 ● APPROXIMATE LOCATION OF SHALLOW ZONE HORIZONTAL EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 ■ APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 ■ APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- S-27 ○ 49.64 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- NM NOT MEASURED
- AT & SF RAILROAD
- ? — 48 — ? CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: WATER LEVELS MEASURED SEPTEMBER 18, 2018



RAYTHEON COMPANY

FULLERTON, CALIFORNIA

WATER LEVEL ELEVATIONS
DEEPER SHALLOW ZONE
SEPTEMBER 2018

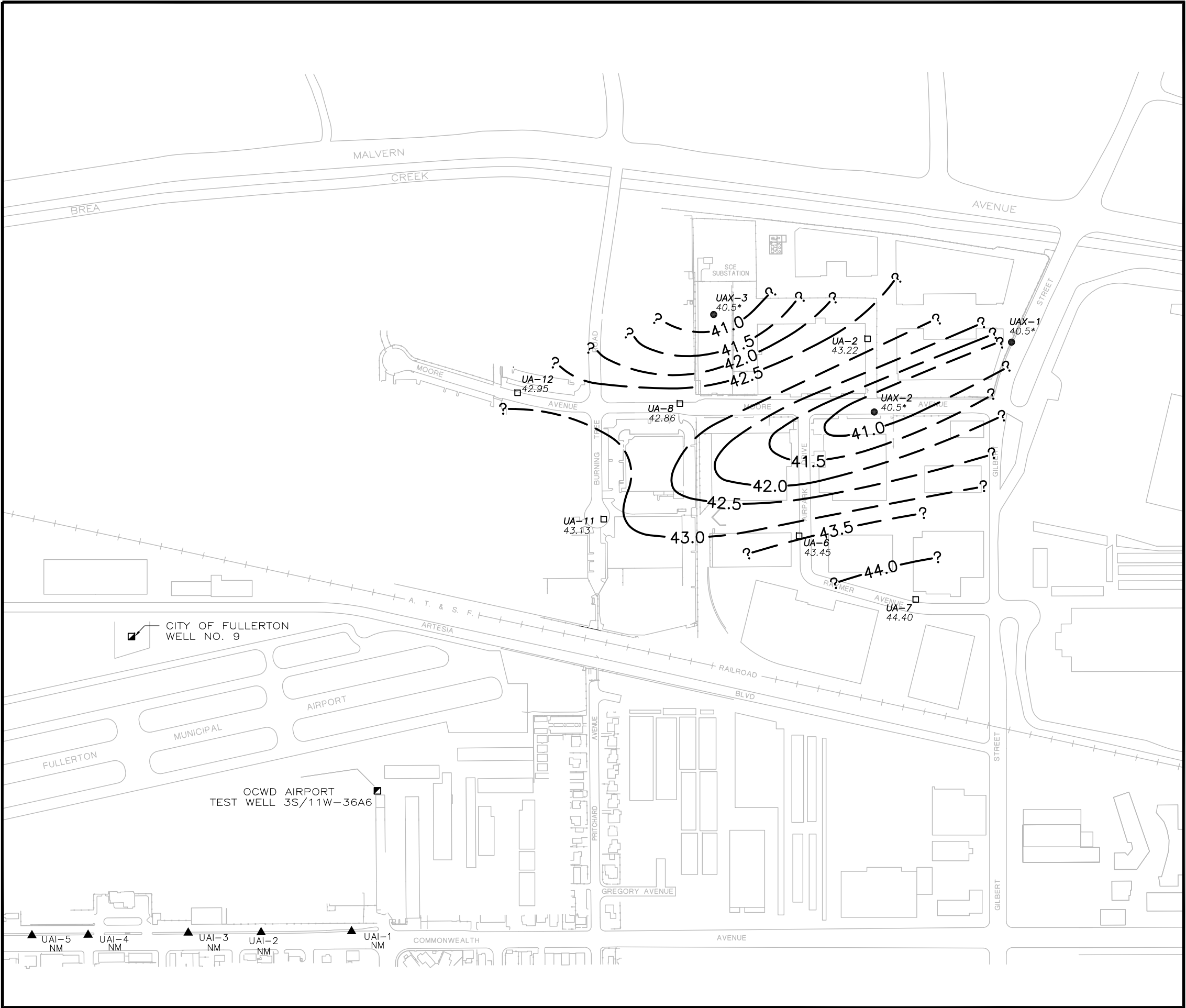
 HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 4

PREP BY AMJ REV BY TJE RPT NO. 764.10 220-2462 A

Jan 17, 2019 - 12:58pm ESS - T:\2019\700-799\764_Raytheon\Hydrogeology\Water Lv\220-2463.dwg

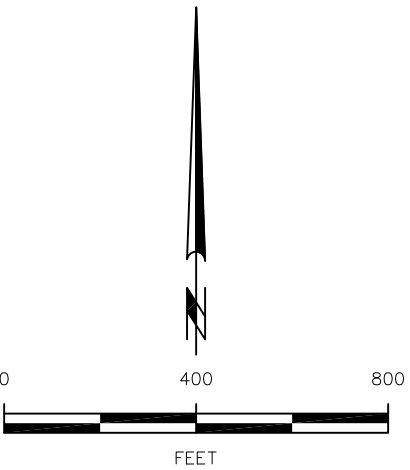


EXPLANATION

- UA-12 APPROXIMATE LOCATION OF UPPER UNIT A MONITOR WELL
- UA-3 APPROXIMATE LOCATION OF UPPER UNIT A EXTRACTION WELL
- UA-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UA-12 42.95 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- 40.5* WATER LEVEL ELEVATION ESTIMATED
- NM NOT MEASURED
- AT & SF RAILROAD
- ? 43.0 ?

CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: WATER LEVELS MEASURED SEPTEMBER 18, 2018



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**WATER LEVEL ELEVATIONS
UPPER UNIT A
SEPTEMBER 2018**

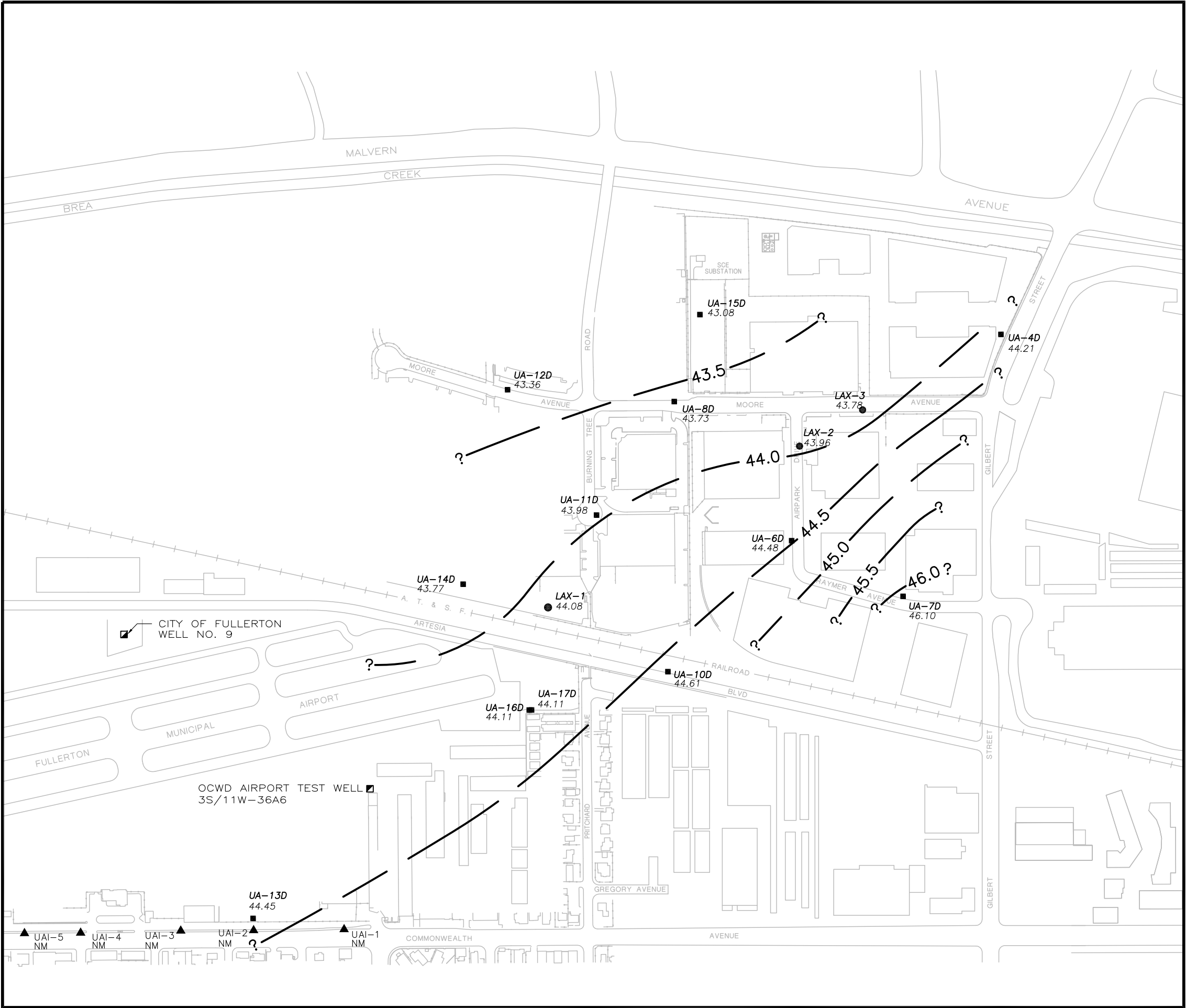
 **HARGIS+ASSOCIATES, INC.**
Hydrogeology/Engineering

01/19

FIGURE 5

PREP BY AMJ REV BY TJE RPT NO. 764.10 220-2463 A

Jan 17, 2019 - 1:01pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Lvl\\220-2464.dwg



EXPLANATION

- UA-6D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- LAX-2 APPROXIMATE LOCATION OF LOWER UNIT A EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UA-6D 44.48 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- NM WATER LEVEL ELEVATION NOT MEASURED
- AT & SF RAILROAD
- ? — 44.0 — — — — — CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: WATER LEVELS MEASURED SEPTEMBER 18, 2018

RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**WATER LEVEL ELEVATIONS
LOWER UNIT A
SEPTEMBER 2018**

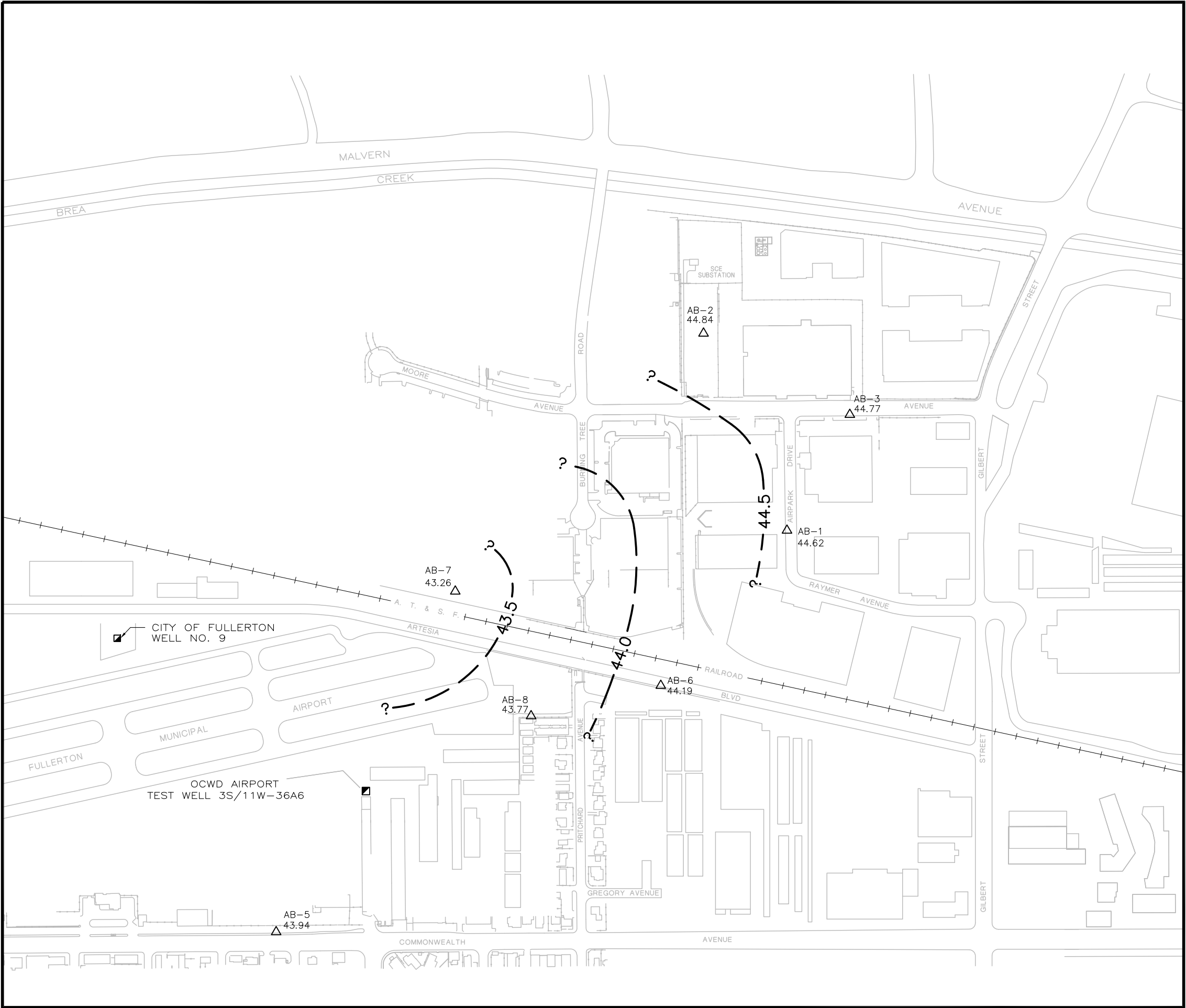
 **HARGIS+ASSOCIATES, INC.**
Hydrogeology/Engineering

01/19

FIGURE 6

PREP BY AMJ REV BY NES RPT NO. 764.10 220-2464 A

Jan 17, 2019 - 1:01pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Lvl\\220-2465.dwg



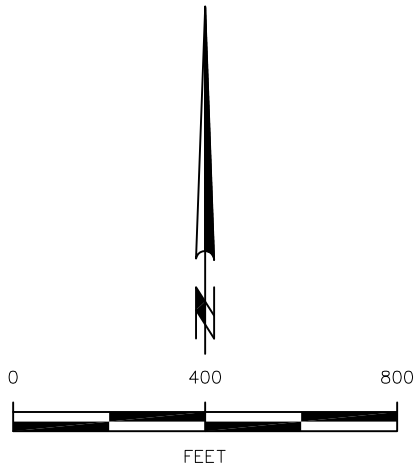
EXPLANATION

- △ AB-7 APPROXIMATE LOCATION OF A/B AQUITARD MONITOR WELL
- CITY OF FULLERTON APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- WELL No.9
- OCWD TEST WELL APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- 3S/11W-36A6
- △ AB-1 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- △ 44.62
- +—+—+— AT & SF RAILROAD

? — 44.0 — — — ?

CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: WATER LEVELS MEASURED SEPTEMBER 18, 2018



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**WATER LEVEL ELEVATIONS
A/B AQUITARD
SEPTEMBER 2018**



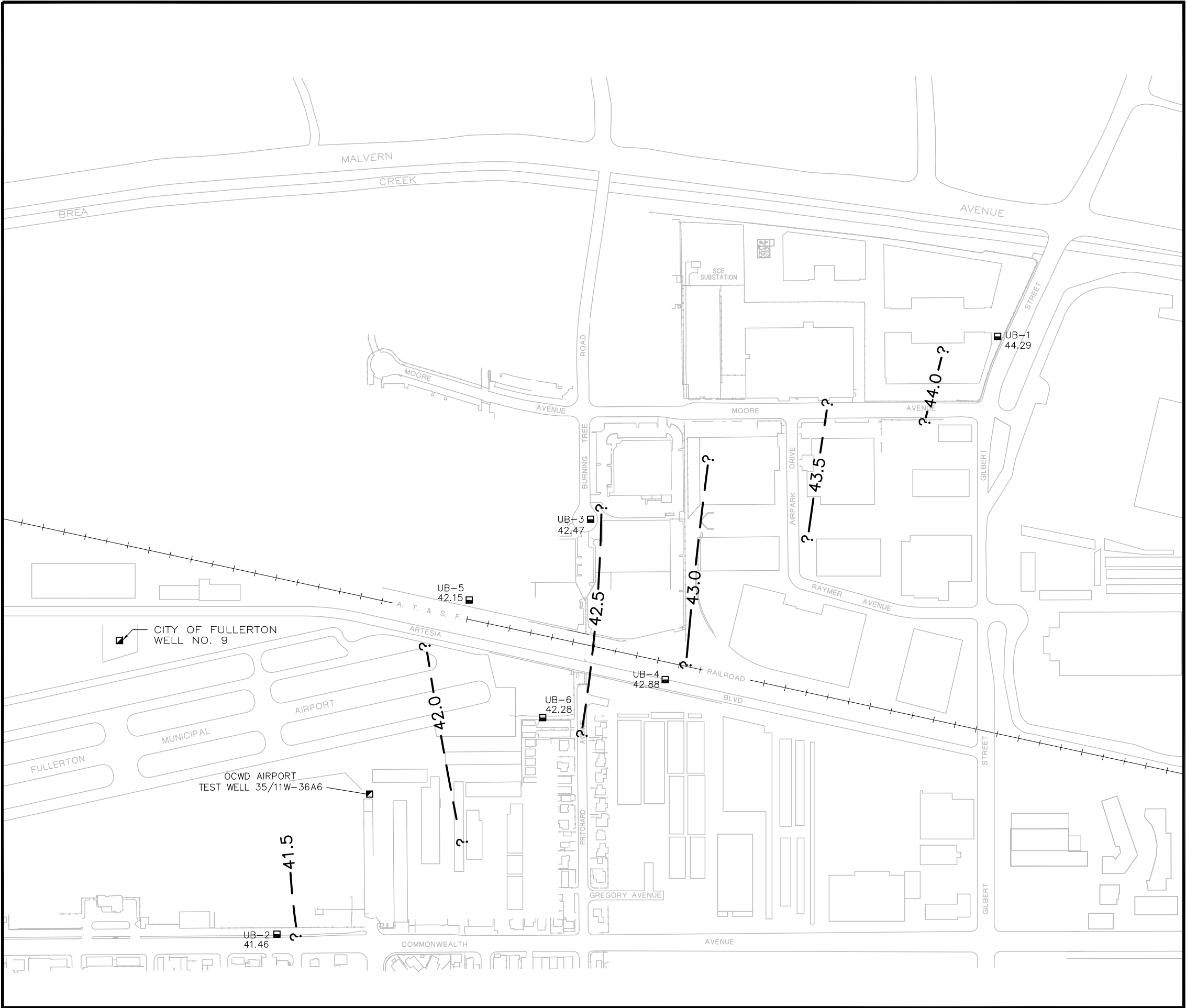
HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 7

PREP BY AMJ REV BY NES RPT NO. 764.10 220-2465 A

Jan 17, 2019 - 1:02pm ESS - T:\2019\700-799\764 Raytheon\Hydrogeology\Water Lvl\220-2466.dwg



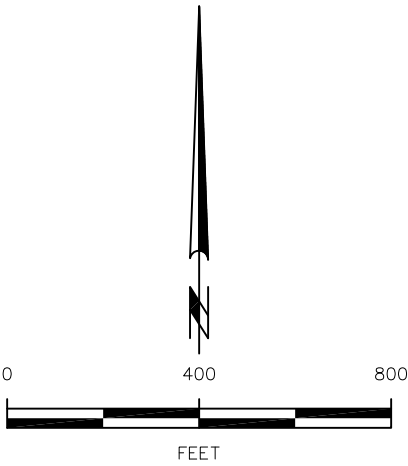
EXPLANATION

- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UB-1 44.29 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- AT & SF RAILROAD

? — 43.0 — — — ?

CONTOUR LINE OF EQUAL WATER LEVEL
ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE
APPROXIMATE, QUERIED WHERE INFERRED

NOTE: WATER LEVELS MEASURED SEPTEMBER 18, 2018



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**WATER LEVEL ELEVATIONS
UNIT B
SEPTEMBER 2018**

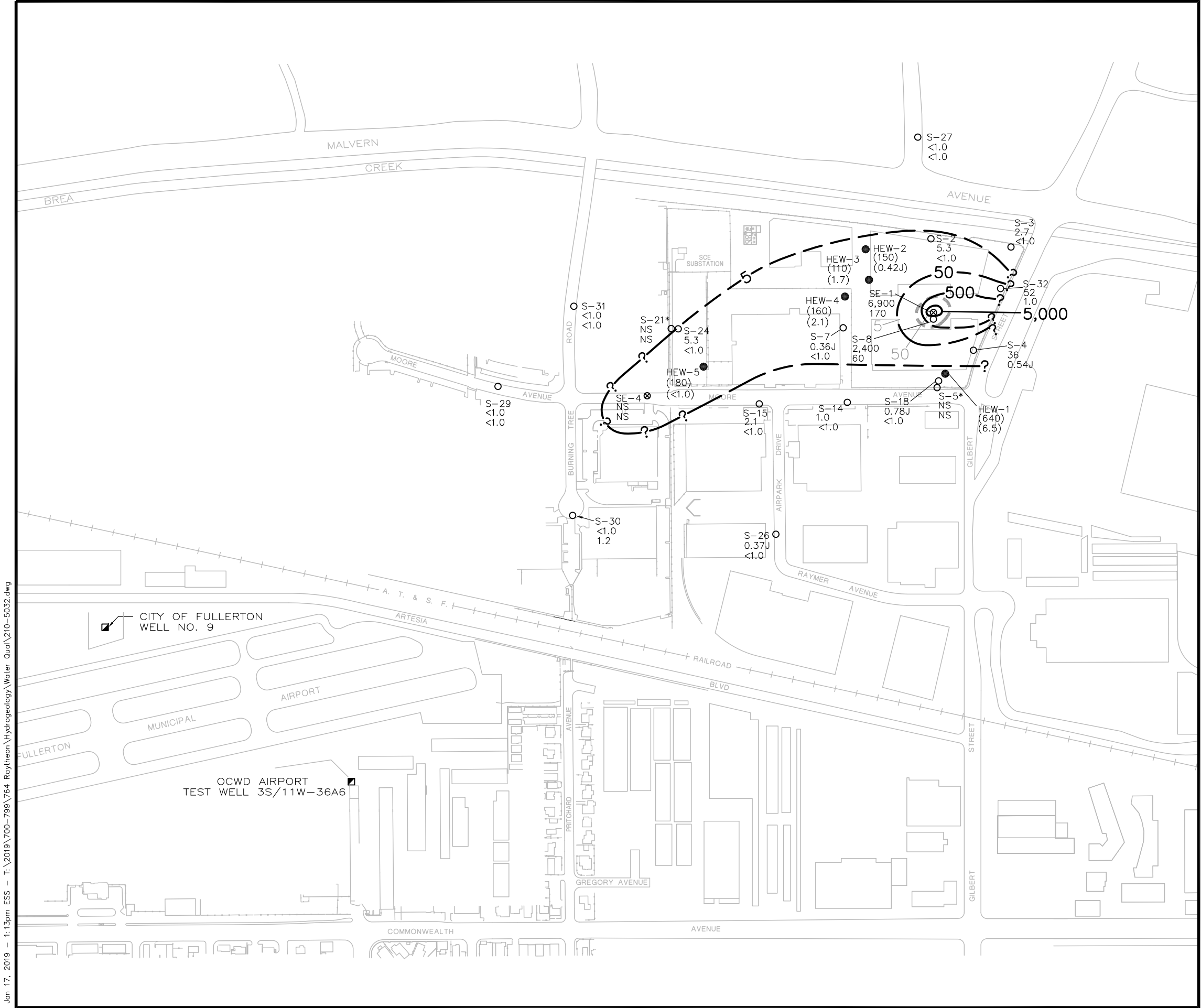
 **HARGIS+ASSOCIATES, INC.**
Hydrogeology/Engineering

01/19

FIGURE 8

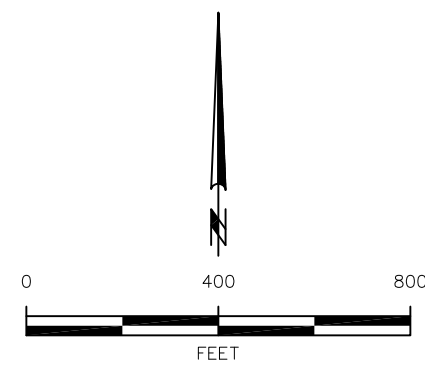
PREP BY AMJ REV BY NES RPT NO. 764.10 220-2466 A

Jan 17, 2019 - 1:13pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Qual\\210-5032.dwg



EXPLANATION

- S-29 ○ APPROXIMATE LOCATION OF SHALLOW ZONE MONITOR WELL
- SE-1 ⊗ APPROXIMATE LOCATION OF SHALLOW ZONE EXTRACTION WELL
- HEW-2 ● APPROXIMATE LOCATION OF SHALLOW ZONE HORIZONTAL EXTRACTION WELL
- (150) CONCENTRATION NOT CONTOURED
- CITY OF FULLERTON WELL No.9 ■ APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 ■ APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- NS NOT SAMPLED
- * WELL WAS SCHEDULED TO BE SAMPLED BUT NOT SAMPLED DUE TO INSUFFICIENT VOLUME OF WATER IN THE WELL
- SE-1 ○ 6,900 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- 170 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR THE SPECIFIED ANALYSIS
- J ESTIMATED CONCENTRATION
- AT & SF RAILROAD
- ? - - - 50 - - - ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- ? - - - 5 - - - ? CONTOUR LINE OF EQUAL CONCENTRATION OF PCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
SHALLOW ZONE, SEPTEMBER 2018

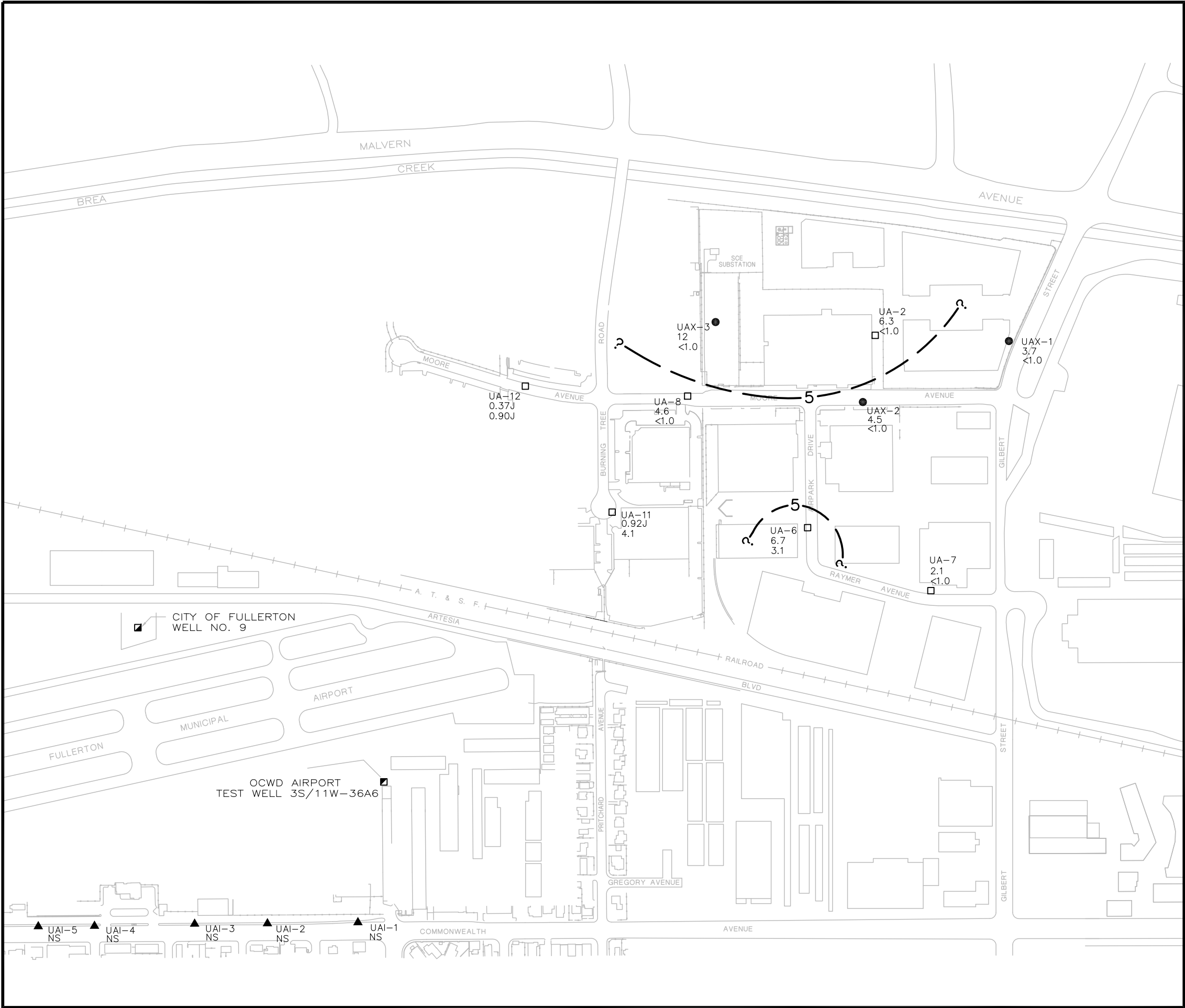
 **HARGIS+ASSOCIATES, INC.**
Hydrogeology/Engineering

01/19

FIGURE 9

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5032 A

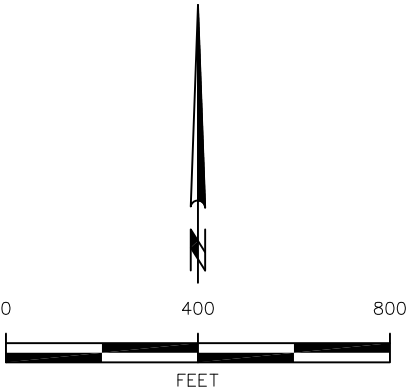
Jan 17, 2019 - 1:14pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Qua\\210-5033.dwg



EXPLANATION

- UA-12 □ APPROXIMATE LOCATION OF UPPER UNIT A MONITOR WELL
- UAX-3 ● APPROXIMATE LOCATION OF UPPER UNIT A EXTRACTION WELL
- UAI-2 ▲ APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- CITY OF FULLERTON WELL No.9 ■ APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 ■ APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UA-2 6.3 □ CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- <1.0 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR THE SPECIFIED ANALYSIS
- NS NOT SAMPLED
- J ESTIMATED CONCENTRATION
- AT & SF RAILROAD
- ? — 5 — — — ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
- DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
UPPER UNIT A, SEPTEMBER 2018

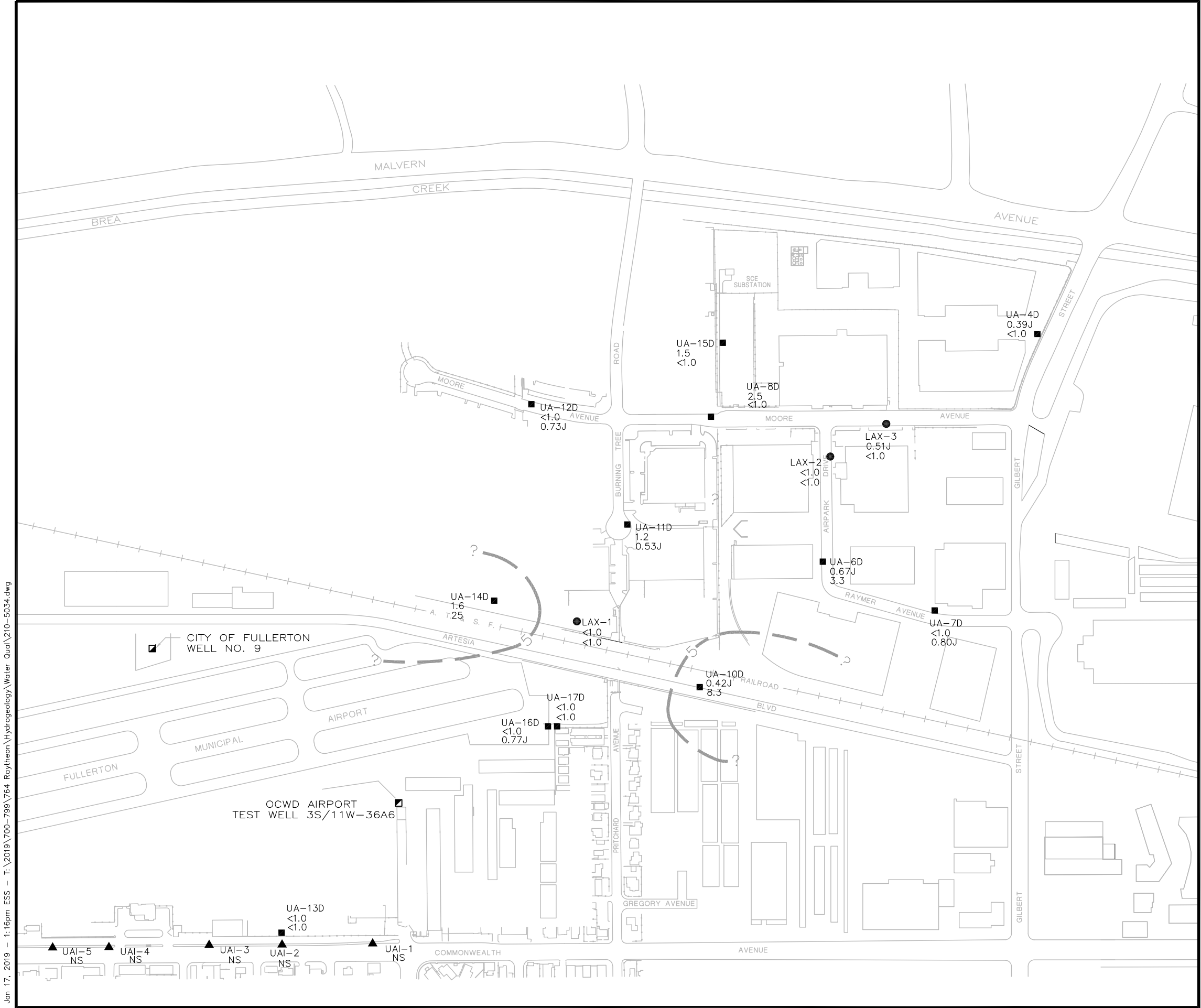
 HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 10

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5033 A

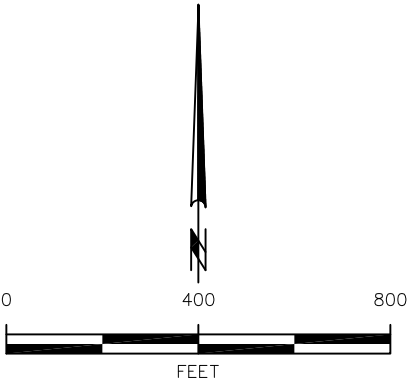
Jan 17, 2019 - 1:16pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Qual\\210-5034.dwg



EXPLANATION

- UA-6D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- LAX-2 APPROXIMATE LOCATION OF LOWER UNIT A EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UA-8D 2.5 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- <1.0 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR THE SPECIFIED ANALYSIS
- NS NOT SAMPLED
- AT & SF RAILROAD
- ? — 5 — — — ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
- DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
LOWER UNIT A, SEPTEMBER 2018

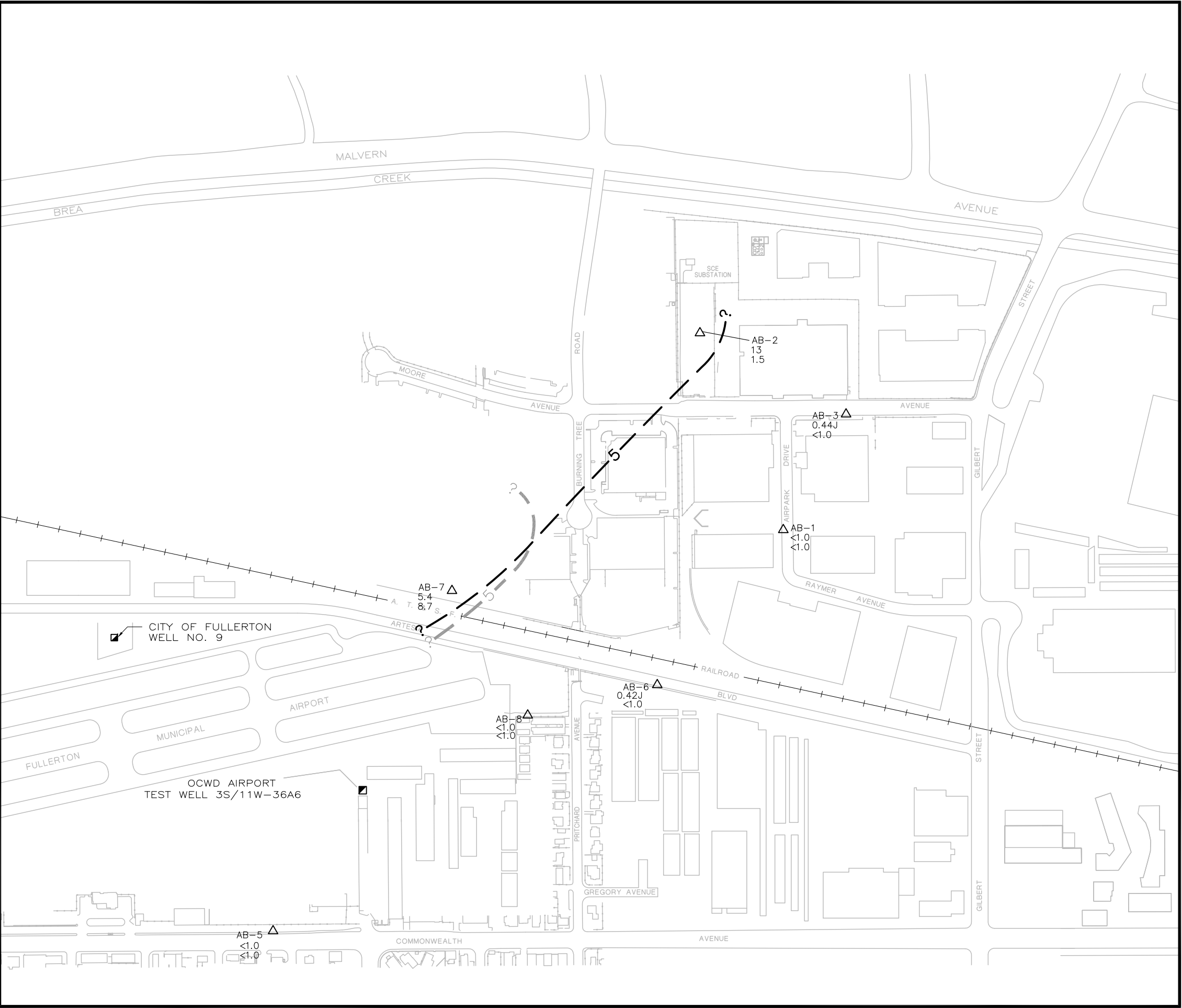


HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 11

Jan 17, 2019 - 1:17pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Qual\\210-5054.dwg



EXPLANATION

- △ AB-7 APPROXIMATE LOCATION OF A/B AQUITARD MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- △ AB-7 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- 5.4 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- 8.7 LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR TCE
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR TCE
- AT & SF RAILROAD

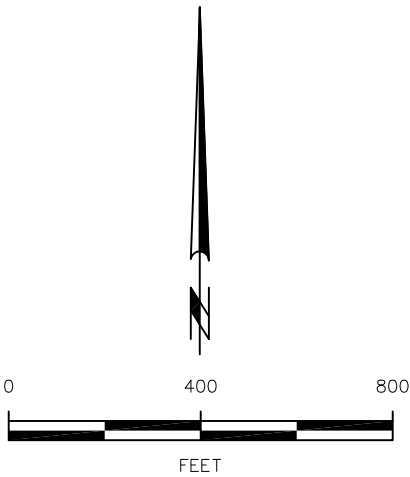
? — 5 — — — ?

CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

? — 5 — — — ?

CONTOUR LINE OF EQUAL CONCENTRATION OF PCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018.
ANALYSES PERFORMED BY EUROFINS CALSCIENCE INC.,
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
A/B AQUITARD, SEPTEMBER 2018



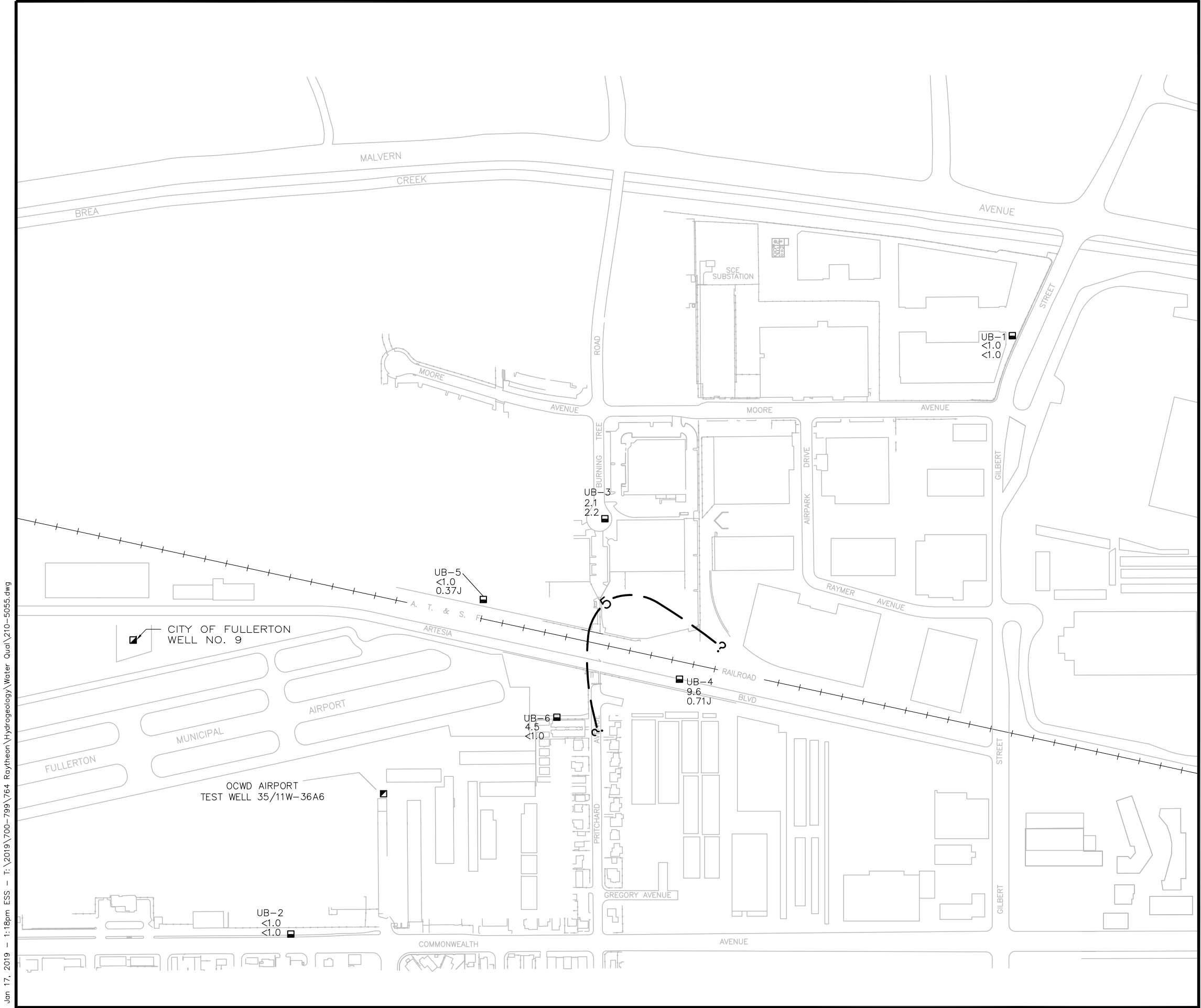
HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 12

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5054 A

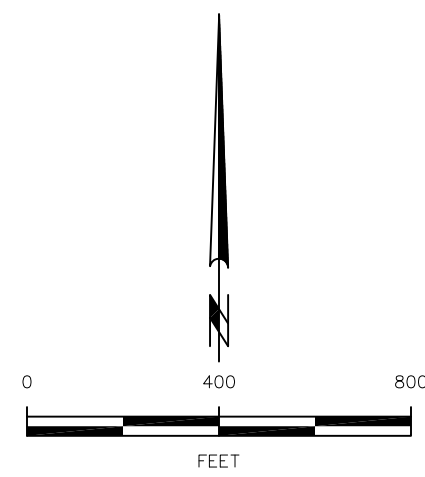
Jan 17, 2019 - 1:18pm ESS - T: \2019\700-799\764 Raytheon\Hydrogeology\Water Qual\210-5055.dwg



EXPLANATION

- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UB-3 2.1 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- 2.2 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR TCE
- AT & SF RAILROAD
- ? 5 ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
- DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018. ANALYSES PERFORMED BY EUROFINS CALSCIENCE INC., GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
UNIT B, SEPTEMBER 2018

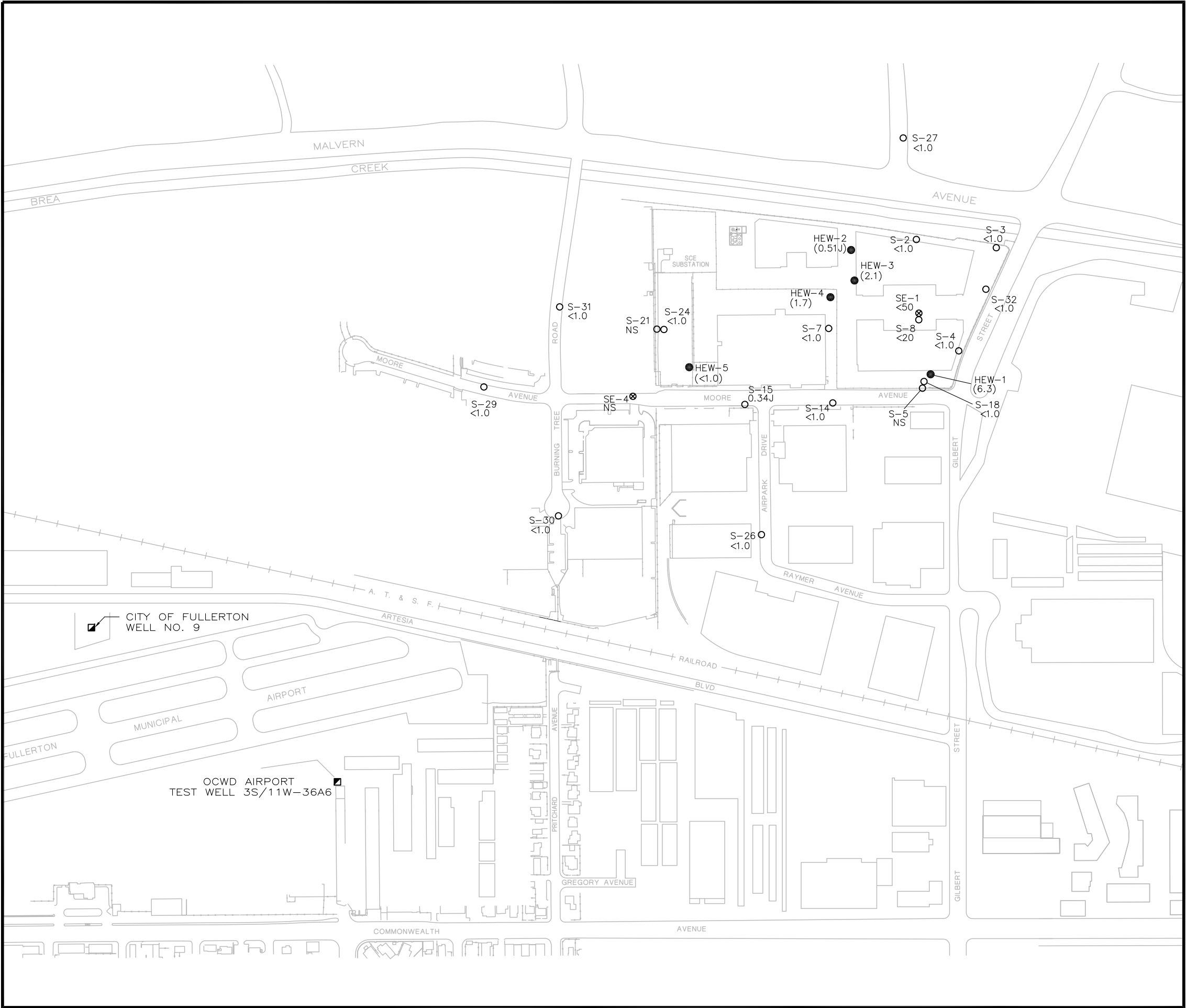
 **HARGIS+ASSOCIATES, INC.**
Hydrogeology/Engineering

01/19

FIGURE 13

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5055 A

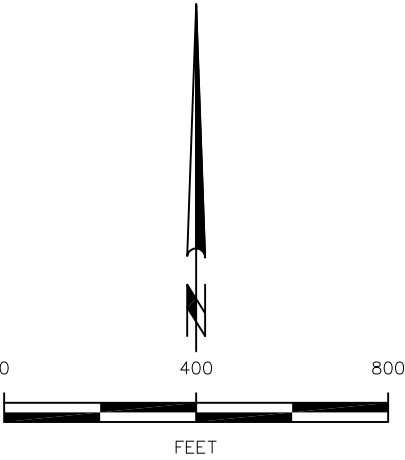
Jan 17, 2019 - 1:20pm ESS - T:\2019\700-799\764 Raytheon\Hydrogeology\Water Qual\210-5035.dwg



EXPLANATION

- S-29 ○ APPROXIMATE LOCATION OF SHALLOW ZONE MONITOR WELL
- SE-1 ⊗ APPROXIMATE LOCATION OF SHALLOW ZONE EXTRACTION WELL
- HEW-5 ● APPROXIMATE LOCATION OF SHALLOW ZONE HORIZONTAL EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 ■ APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 ■ APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- S-24 ○ <1.0 CONCENTRATION OF 1,1-DICHLOROETHYLENE (1,1-DCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR 1,1-DCE
- NS NOT SAMPLED
- () NOT CONTOURED
- J ESTIMATED CONCENTRATION
- AT & SF RAILROAD

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY

FULLERTON, CALIFORNIA

1,1-DICHLOROETHYLENE
SHALLOW ZONE
SEPTEMBER 2018

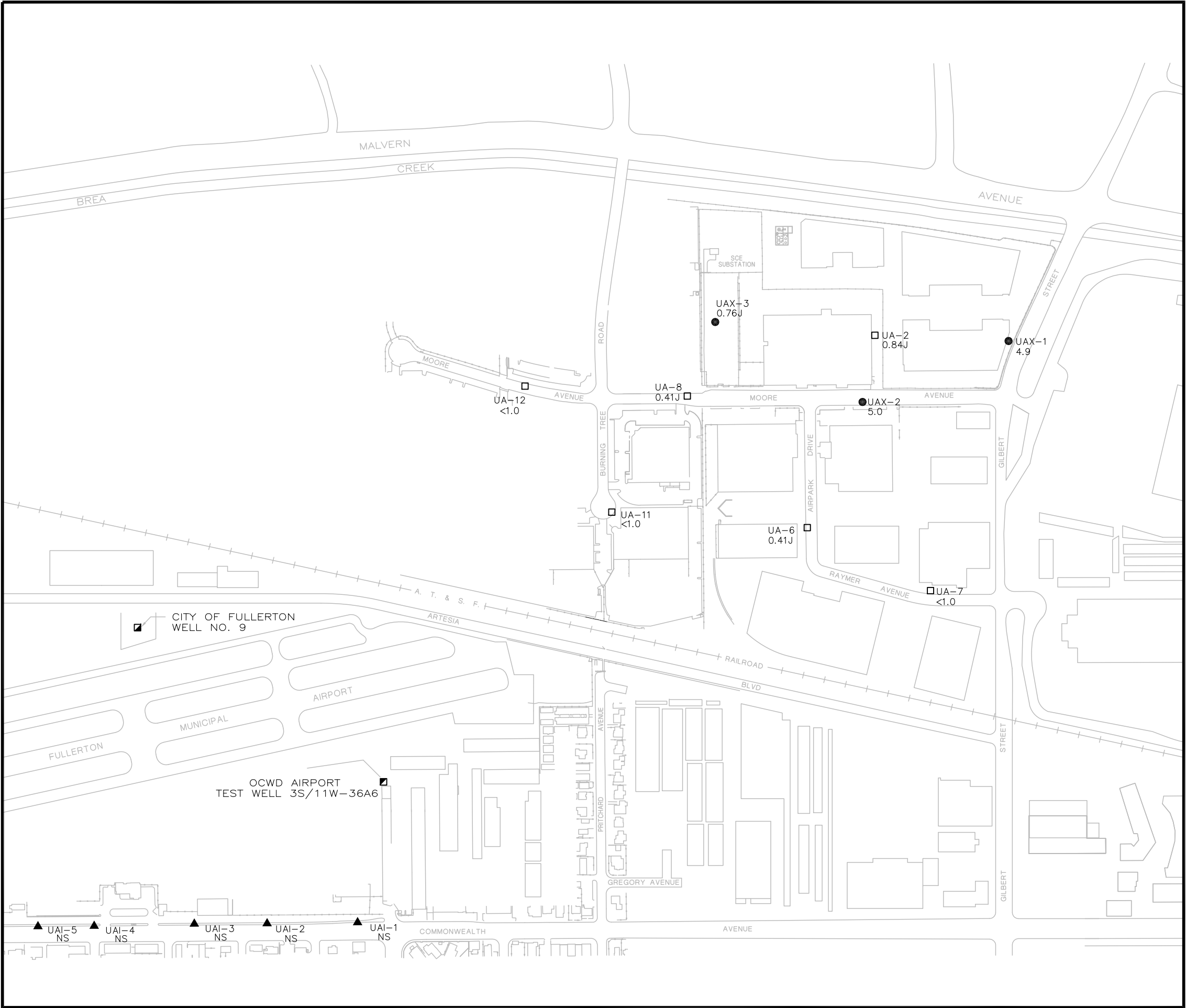
 HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 14

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5035 A

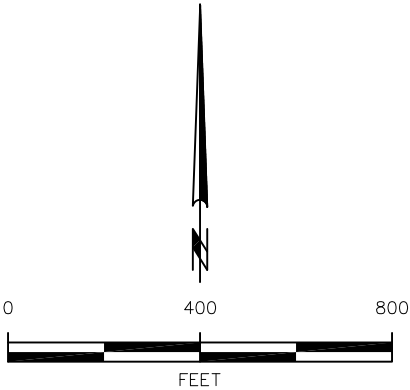
Jan 17, 2019 - 1:20pm ESS - T:\2019\700-799\764 Raytheon\Hydrogeology\Water Qual\210-5036.dwg



EXPLANATION

- UA-12 APPROXIMATE LOCATION OF UPPER UNIT A MONITOR WELL
- UAX-3 APPROXIMATE LOCATION OF UPPER UNIT A EXTRACTION WELL
- UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UAX-1 4.9 CONCENTRATION OF 1,1-DICHLOROETHYLENE (1,1-DCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR 1,1-DCE
- NS NOT SAMPLED
- J ESTIMATED CONCENTRATION
- AT & SF RAILROAD

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

1,1-DICHLOROETHYLENE
UPPER UNIT A
SEPTEMBER 2018

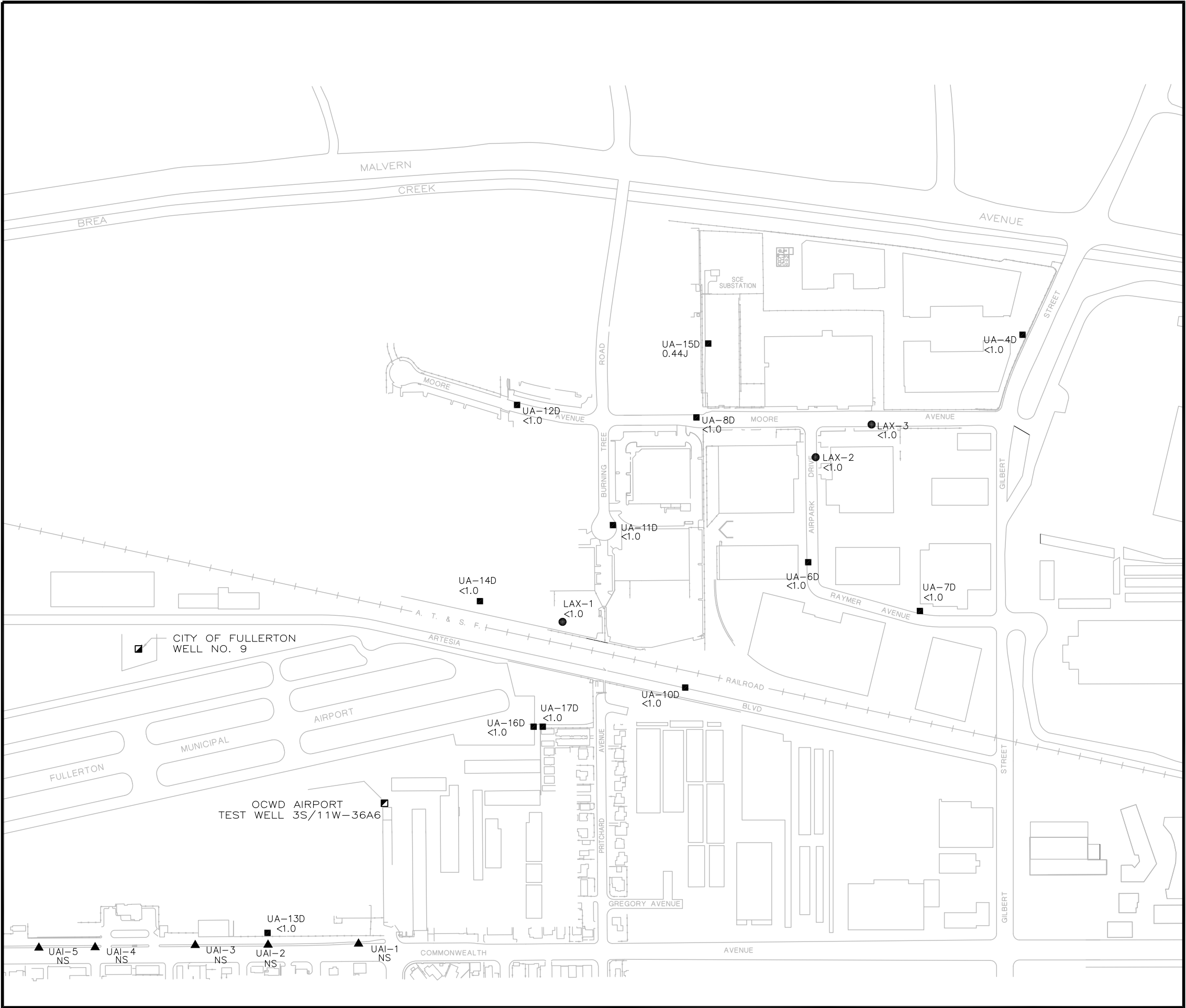
 HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 15

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5036 A

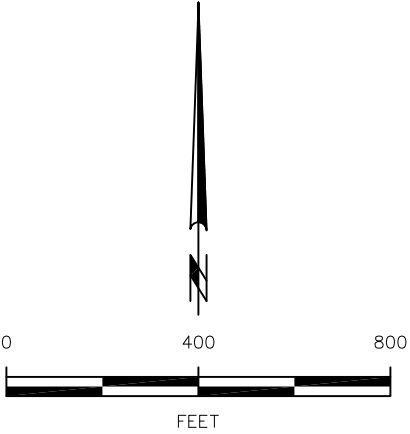
Jan 17, 2019 - 1:21pm ESS - T: \2019\700-799\764 Raytheon\Hydrogeology\Water Qual\210-5037.dwg



EXPLANATION

- UA-6D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- LAX-2 APPROXIMATE LOCATION OF LOWER UNIT A EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- LAX-2 <1.0 CONCENTRATION OF 1,1-DICHLOROETHYLENE (1,1-DCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR 1,1-DCE
- NS NOT SAMPLED
- AT & SF RAILROAD

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

1,1-DICHLOROETHYLENE
LOWER UNIT A
SEPTEMBER 2018

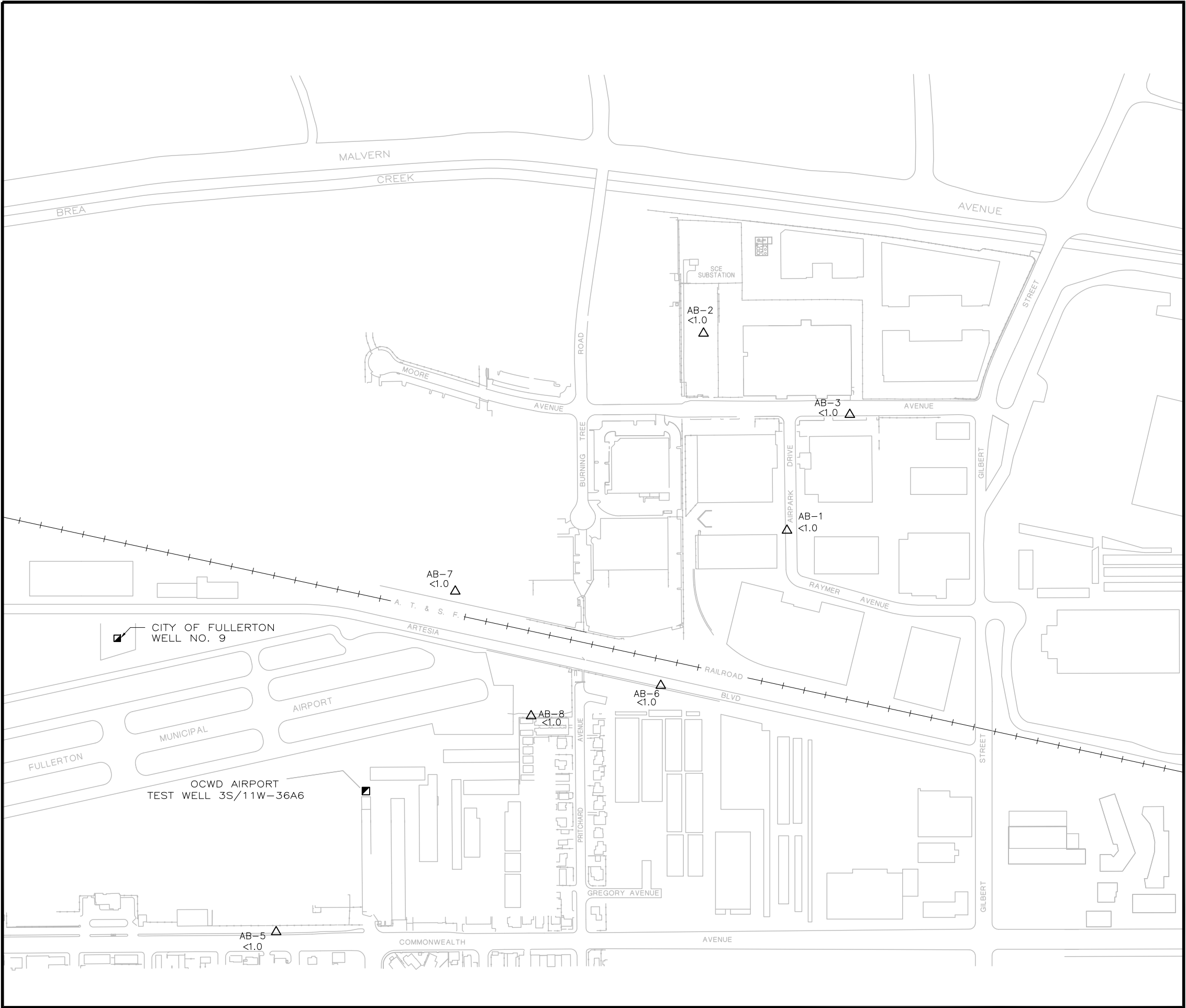
 HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 16

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5037 A

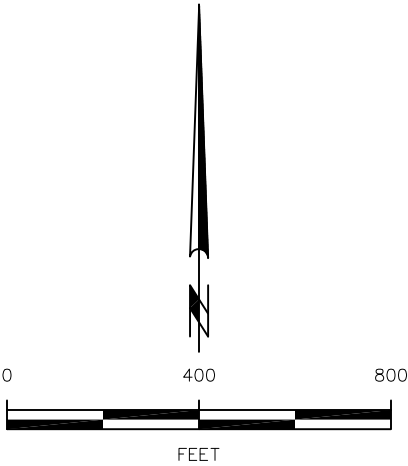
Jan 17, 2019 - 1:21pm ESS - T: \\2019\\700-799\\764 Raytheon\\Hydrogeology\\Water Qual\\210-5056.dwg



EXPLANATION

- △ AB-7 APPROXIMATE LOCATION OF A/B AQUITARD MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- △ AB-7 <1.0 CONCENTRATION OF 1,1-DICHLOROETHYLENE (1,1-DCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR 1,1-DCE
- AT & SF RAILROAD

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018. ANALYSES PERFORMED BY EUROFINS CALSCIENCE INC., GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY

FULLERTON, CALIFORNIA

1,1-DICHLOROETHYLENE
A/B AQUITARD
SEPTEMBER 2018

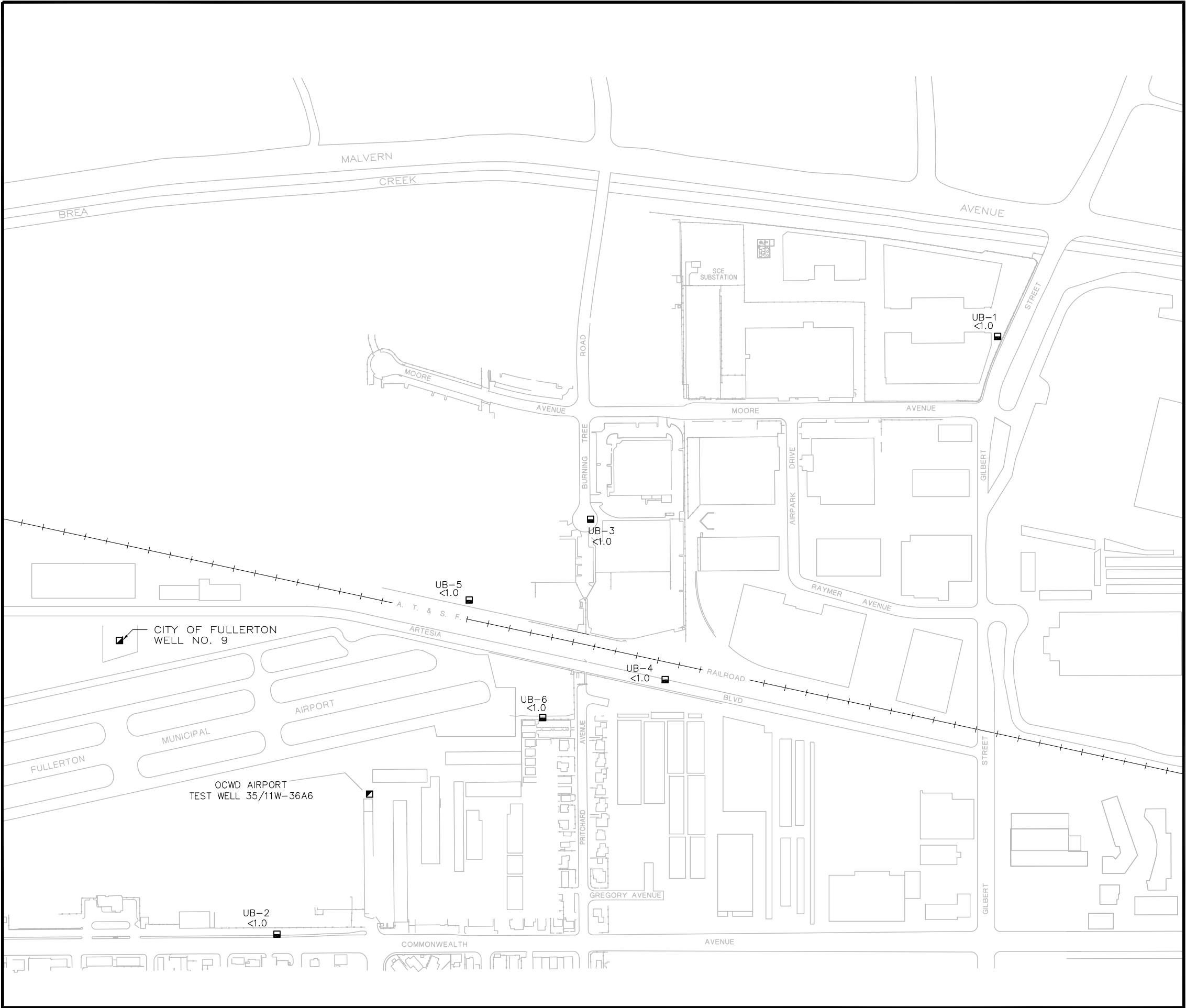
HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 17

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5056 A

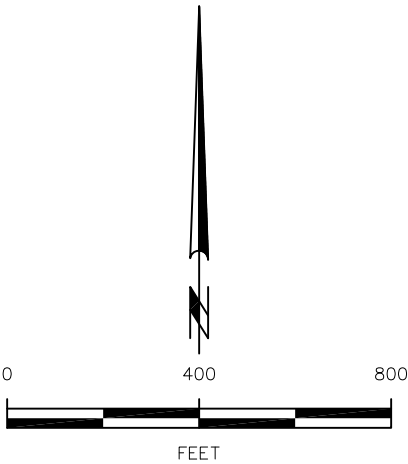
Jan 17, 2019 - 1:22pm ESS - T:\2019\700-799\764 Raytheon\Hydrogeology\Water Qual\210-5057.dwg



EXPLANATION

- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UB-1 <1.0 CONCENTRATION OF 1,1-DICHLOROETHYLENE (1,1-DCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR 1,1-DCE
- AT & SF RAILROAD

NOTE: GROUNDWATER SAMPLES COLLECTED SEPTEMBER 2018. ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC., GARDEN GROVE, CALIFORNIA.



RAYTHEON COMPANY

FULLERTON, CALIFORNIA

1,1-DICHLOROETHYLENE
UNIT B
SEPTEMBER 2018

HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

01/19

FIGURE 18

PREP BY AMJ REV BY TJE RPT NO. 764.11 210-5057 A

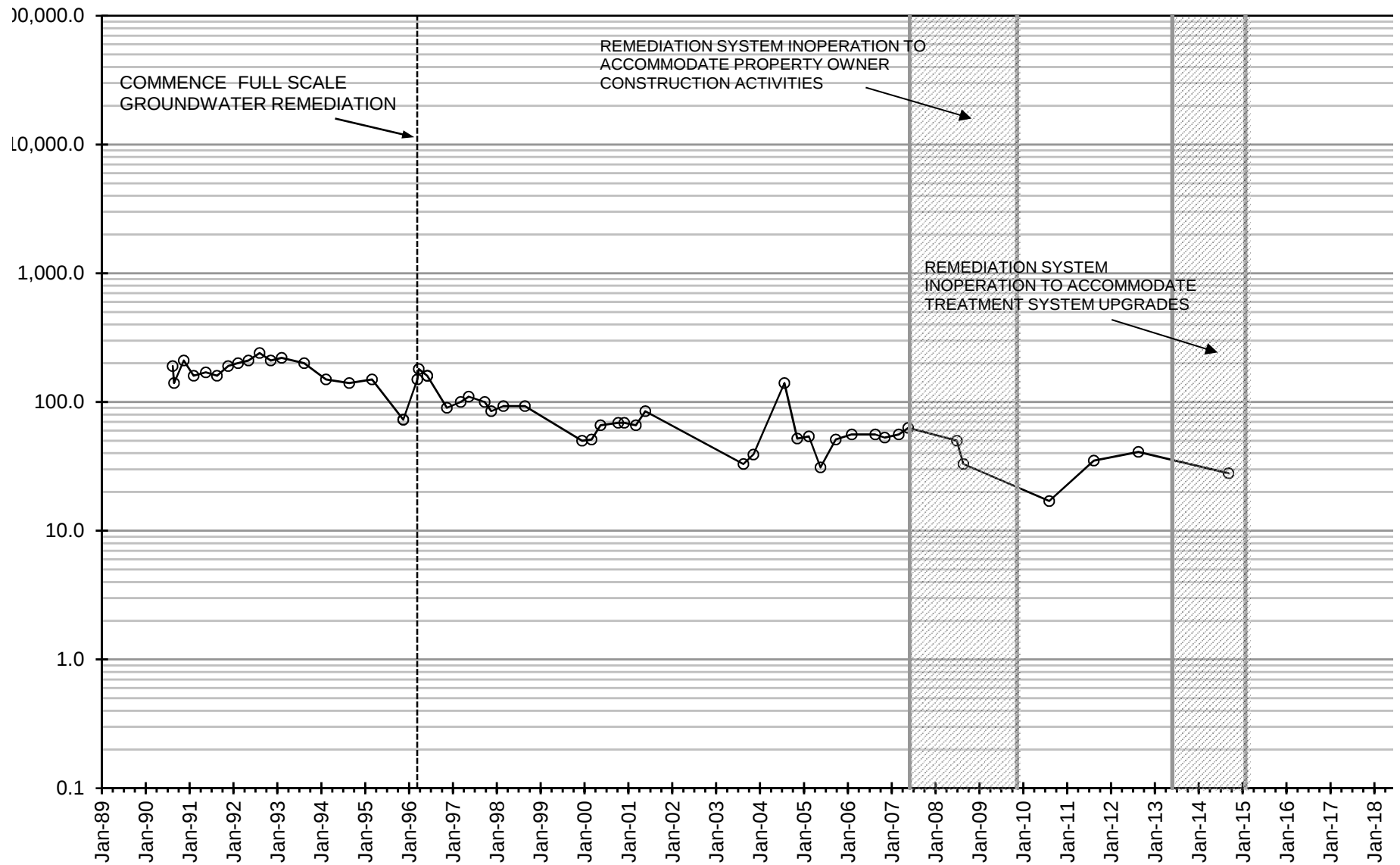


FIGURE 19. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL SE-04

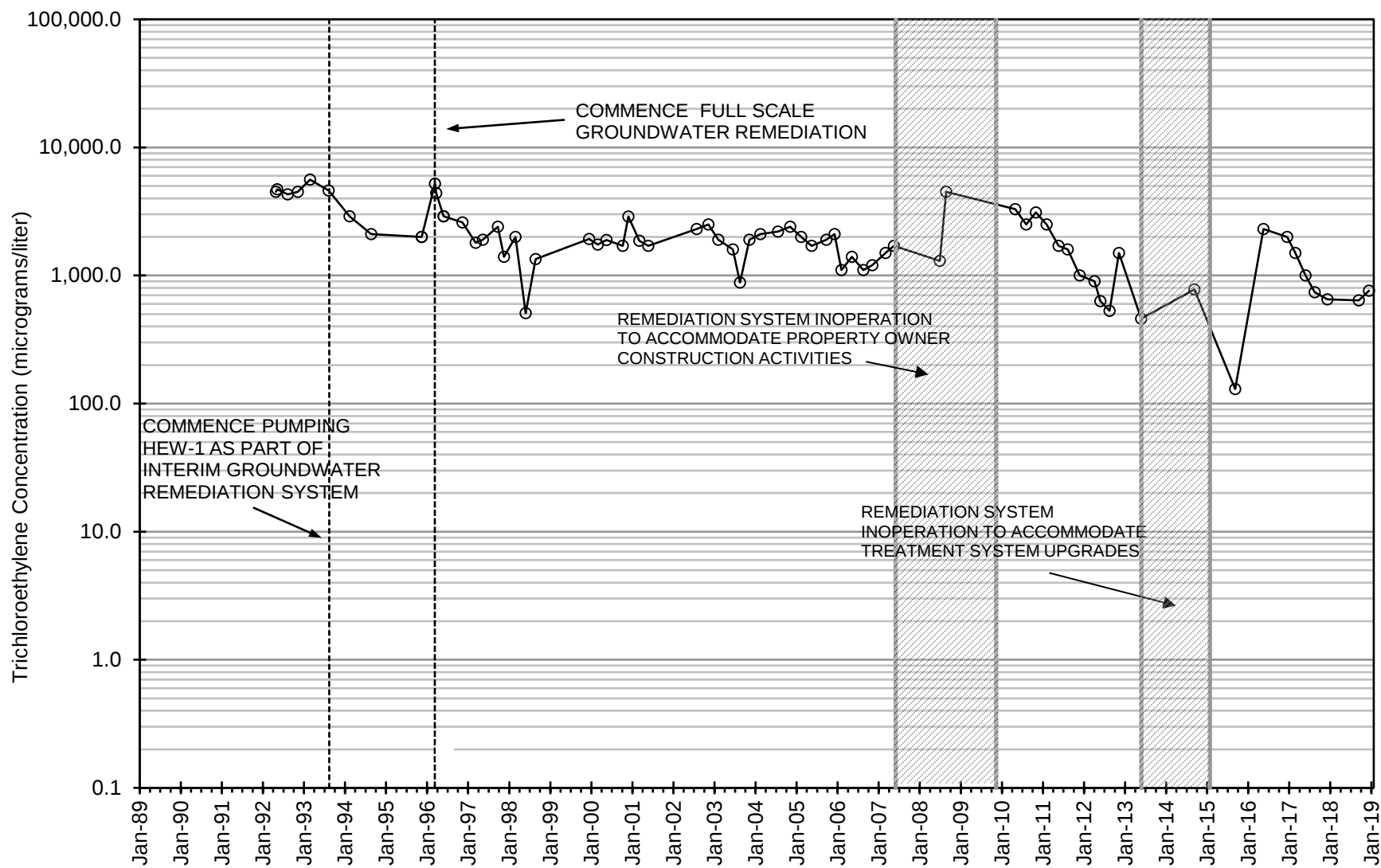


FIGURE 20. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-01

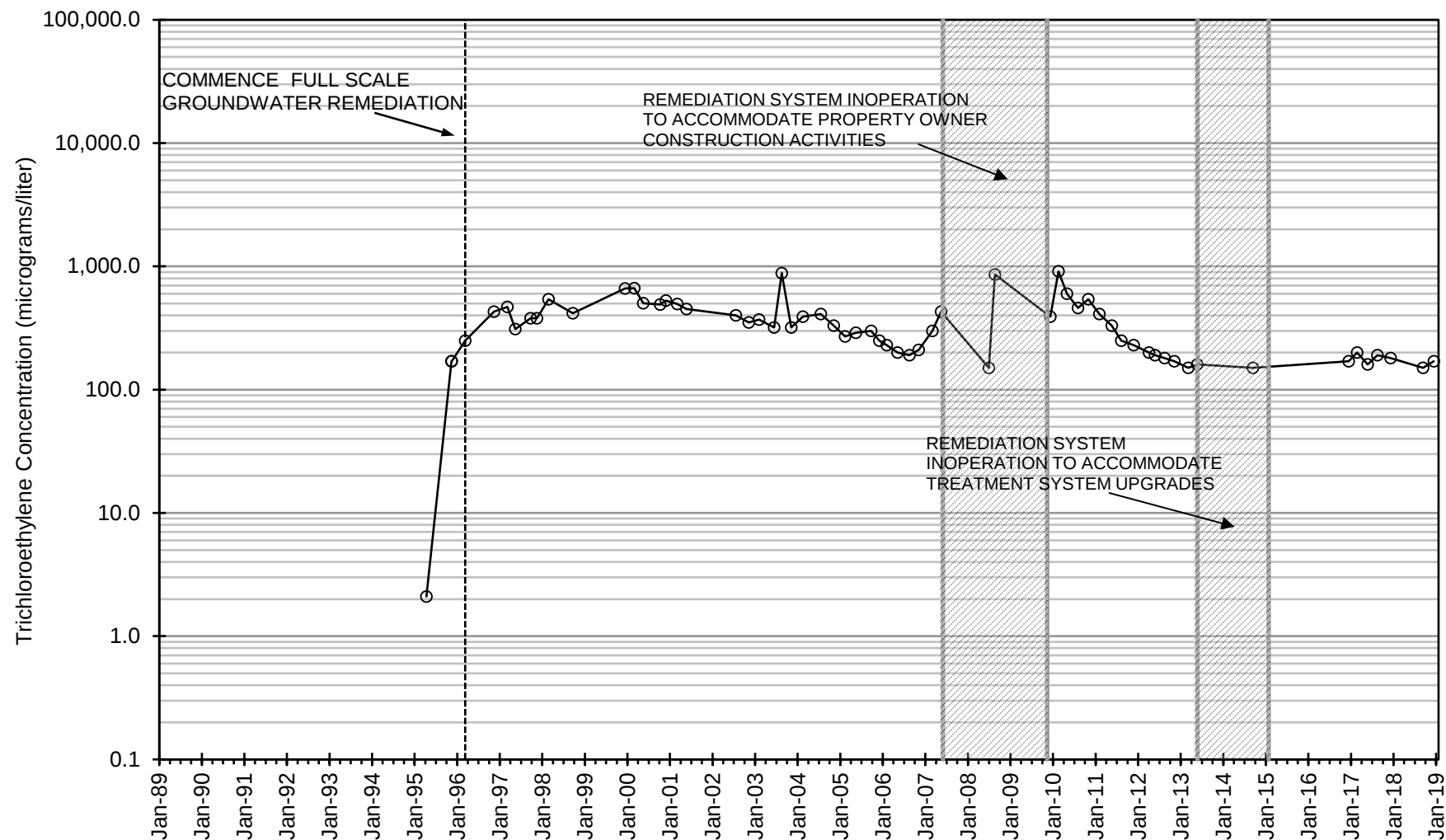


FIGURE 21. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-02

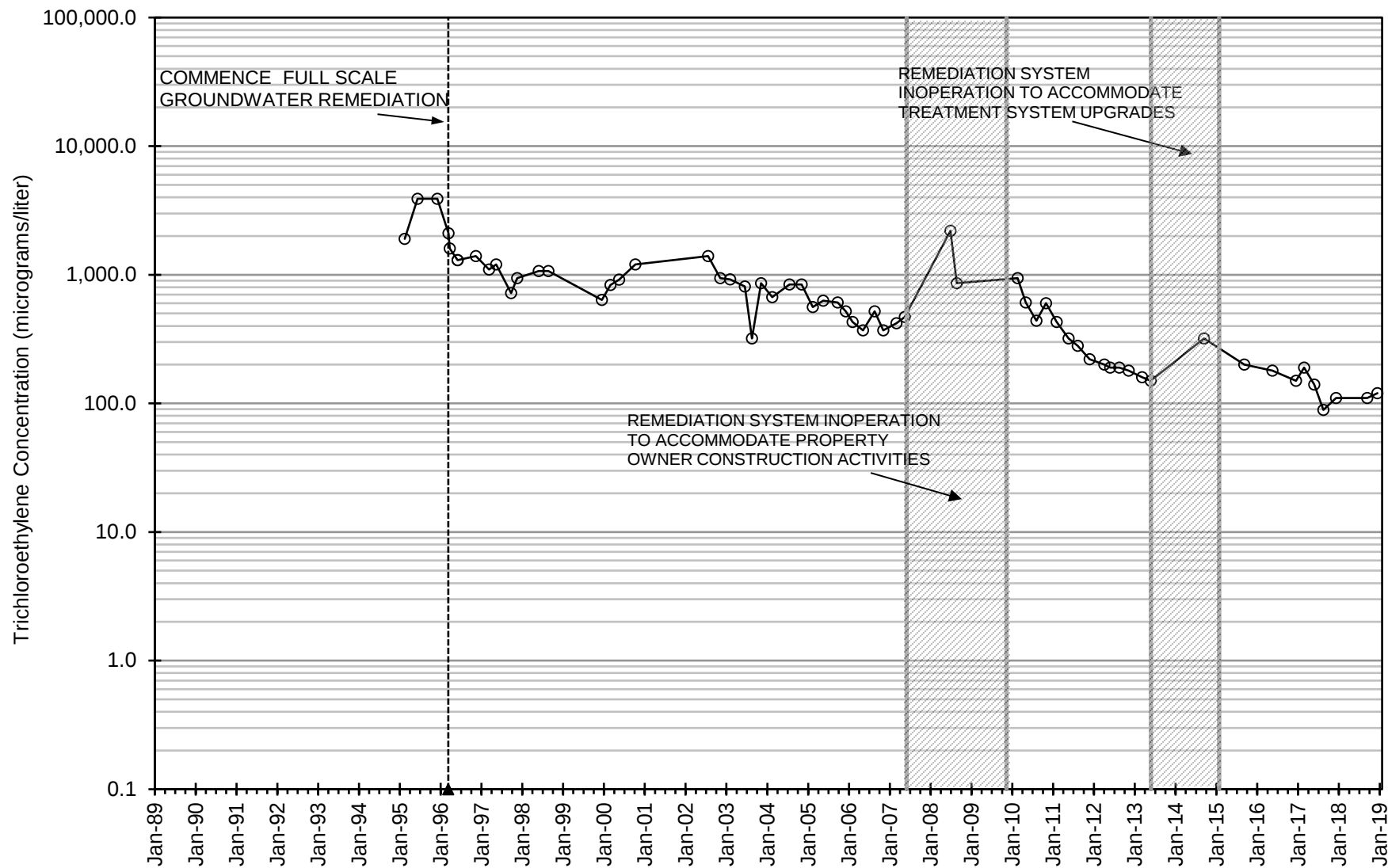


FIGURE 22. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-03

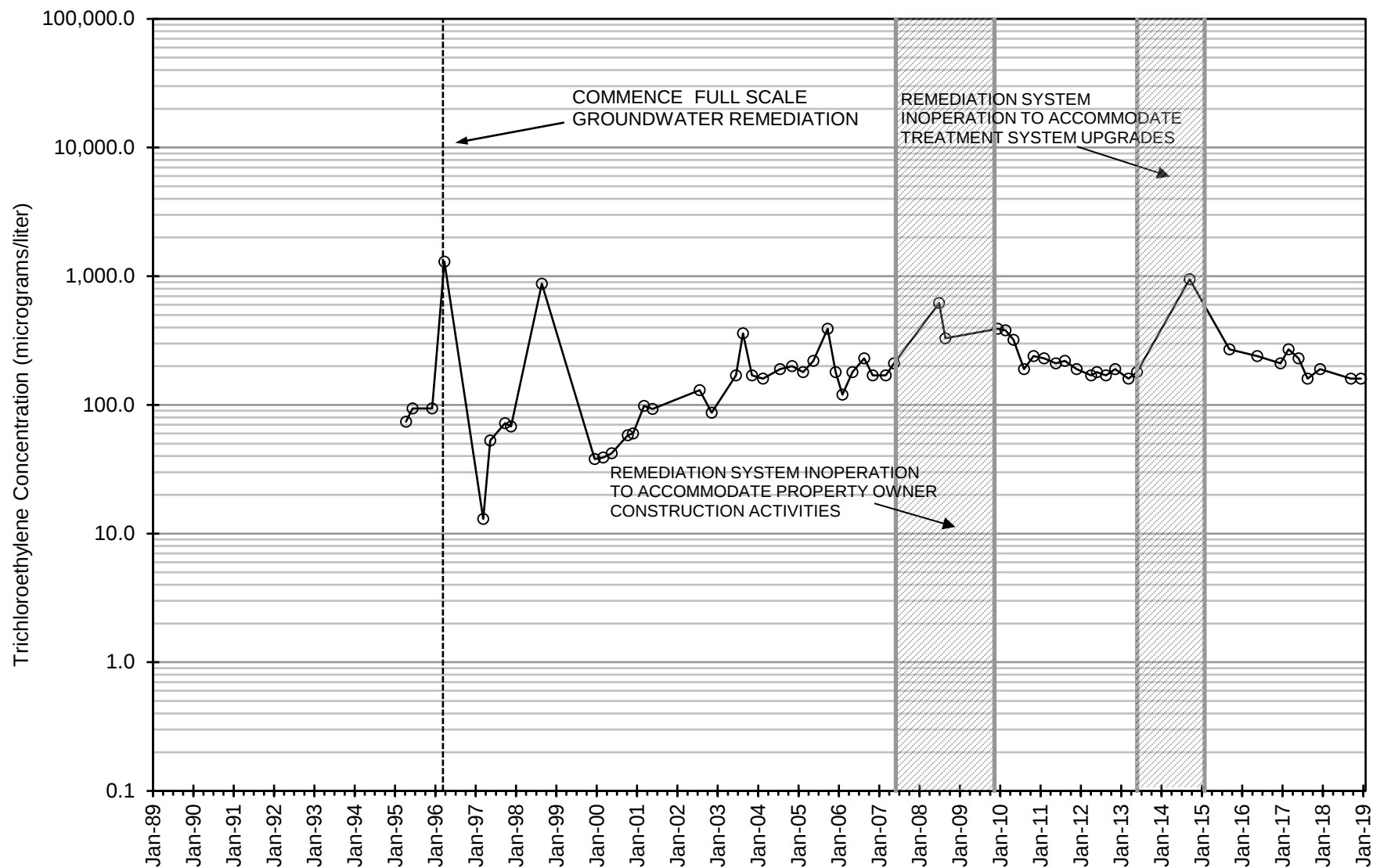


FIGURE 23. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-04

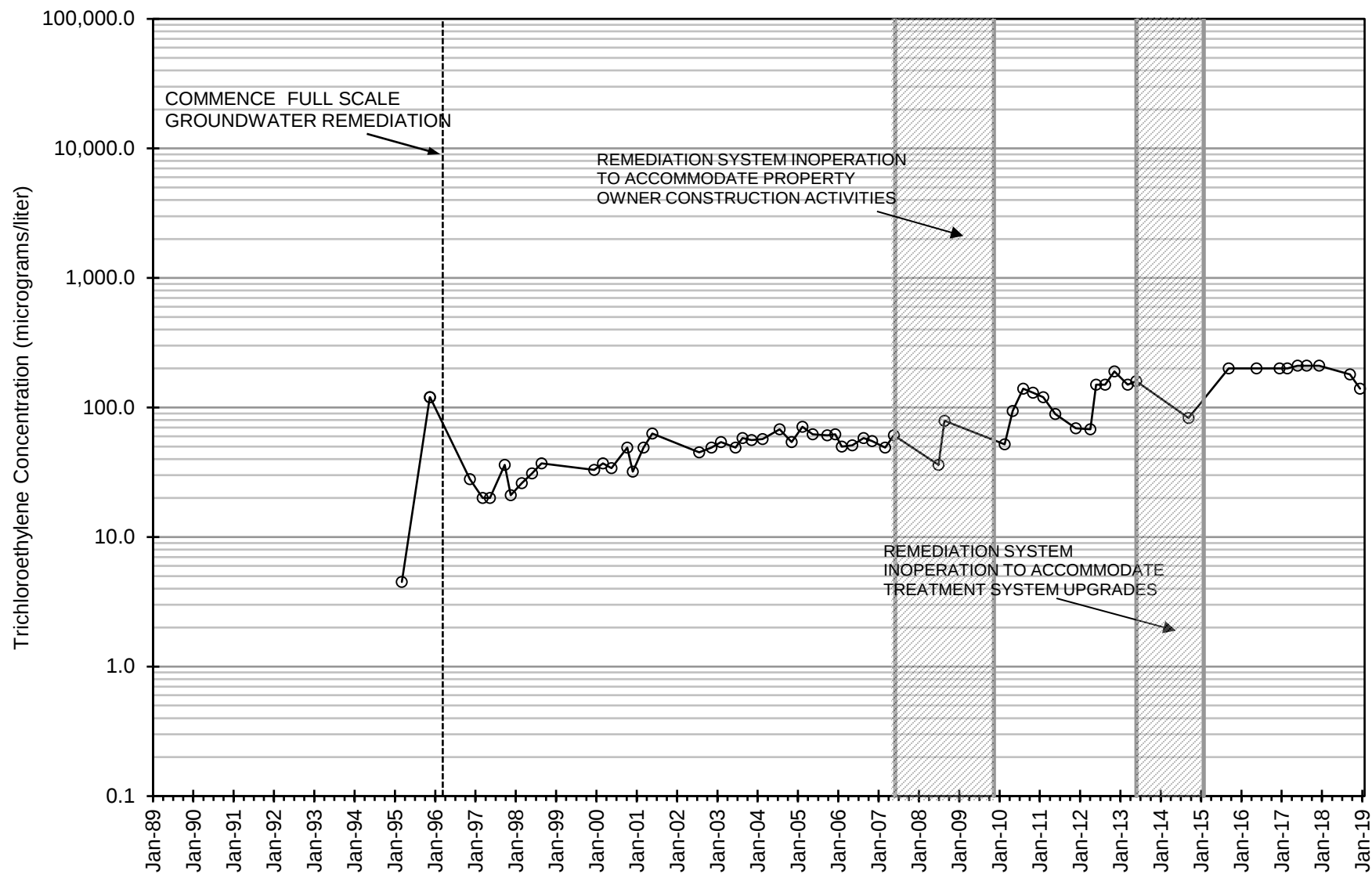


FIGURE 24. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-05

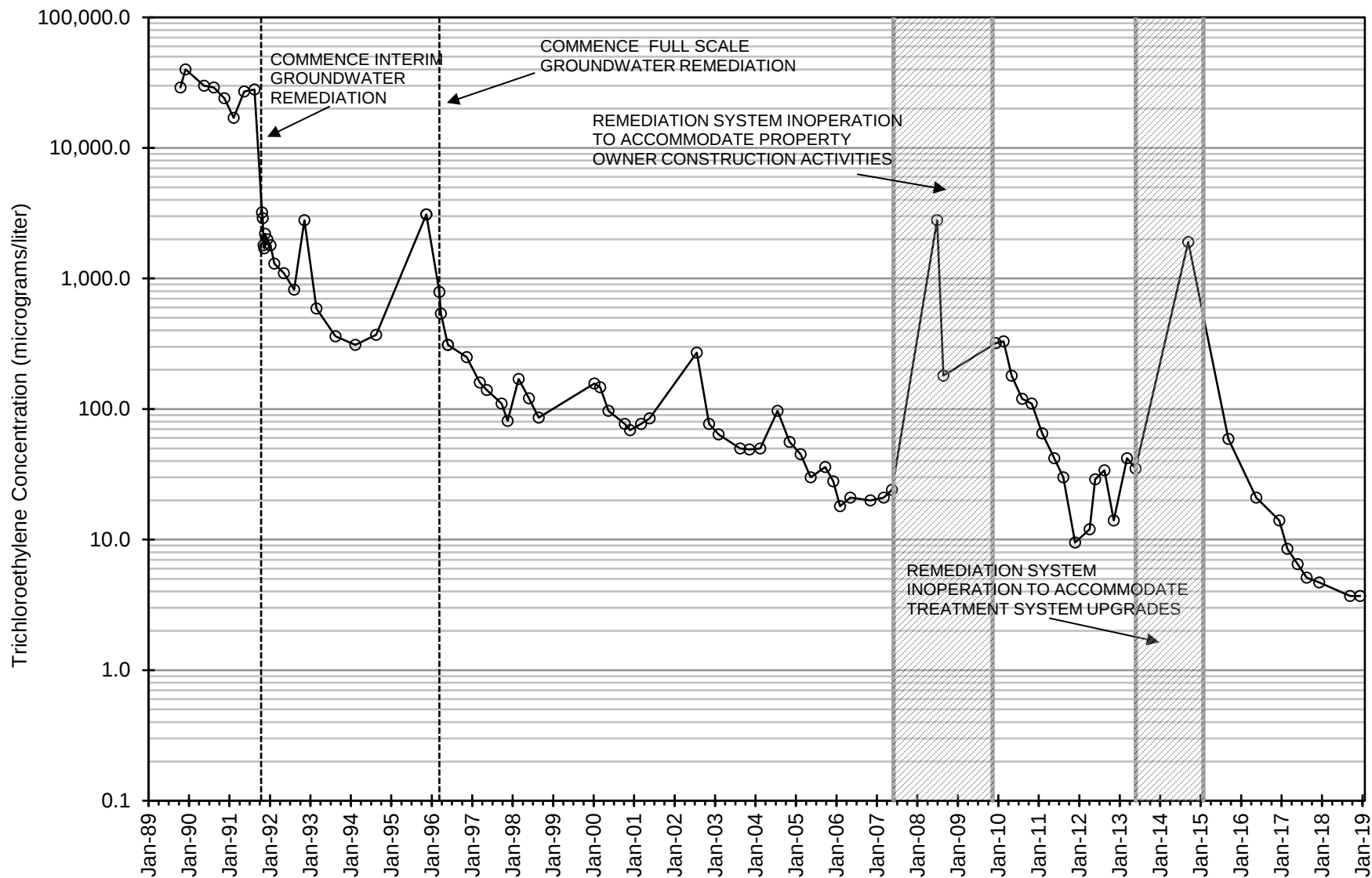


FIGURE 25. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL UAX-01

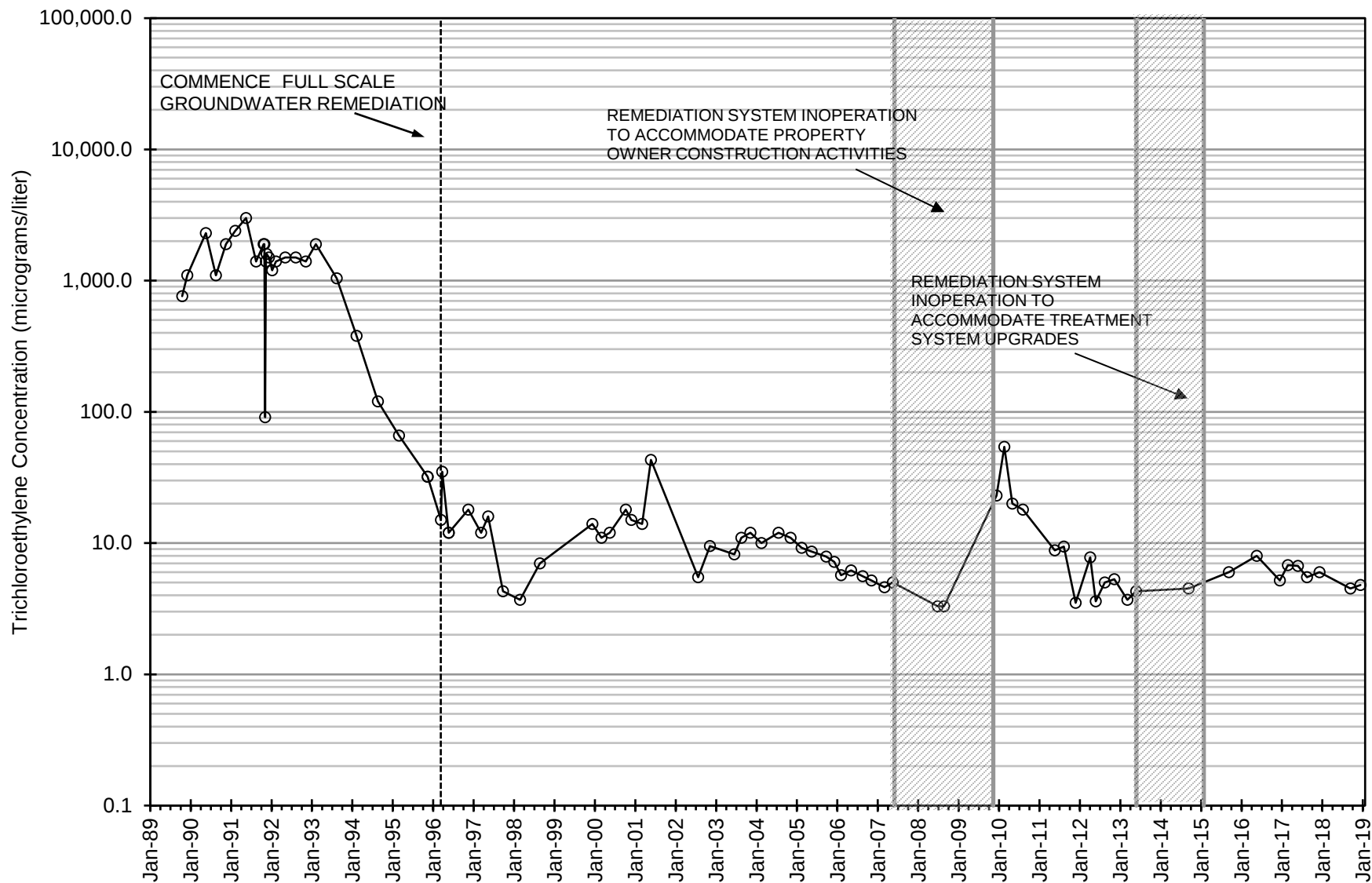


FIGURE 26. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL UAX-02

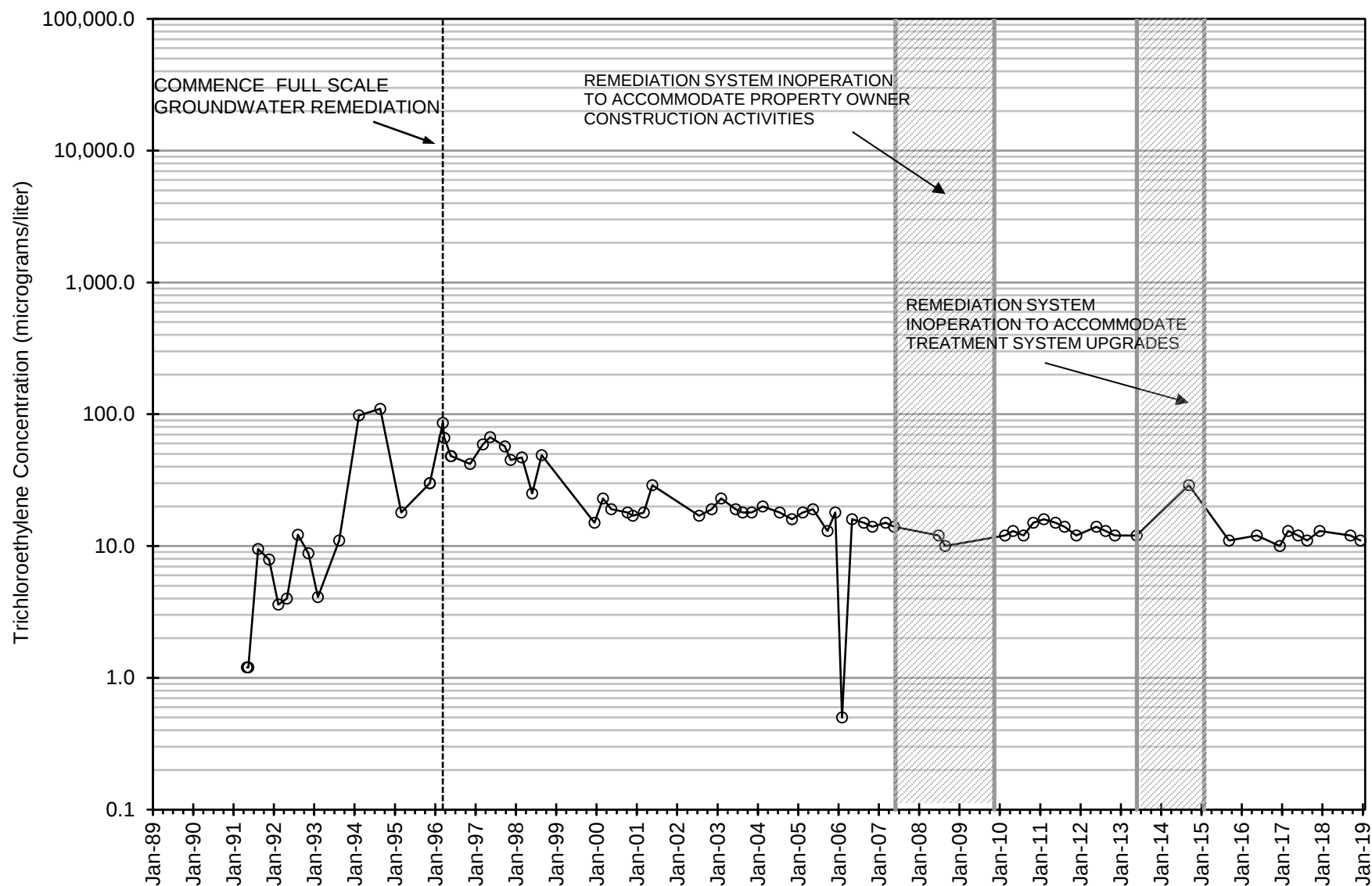


FIGURE 27. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL UAX-03

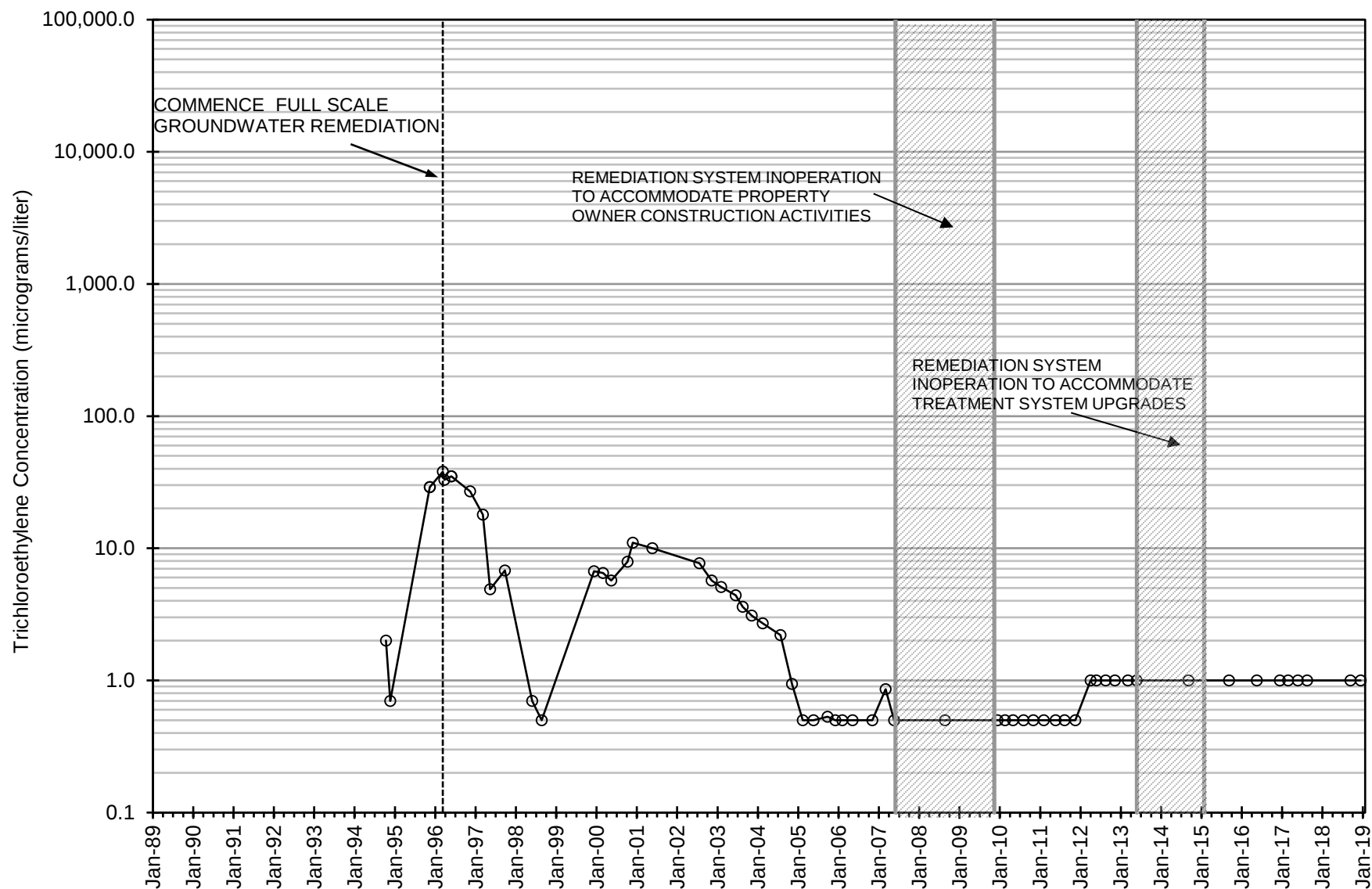


FIGURE 28. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL LAX-01

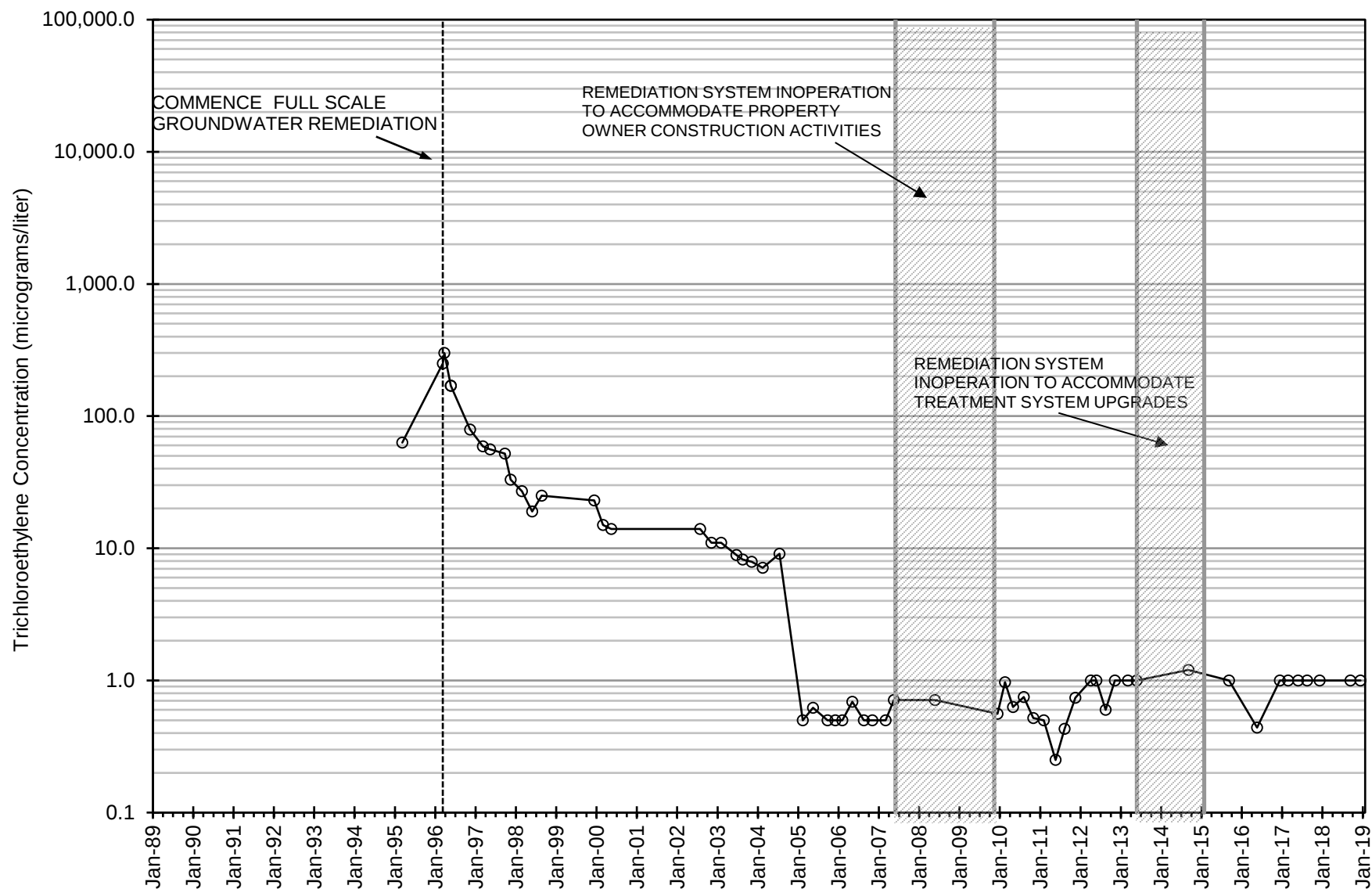


FIGURE 29. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL LAX-02

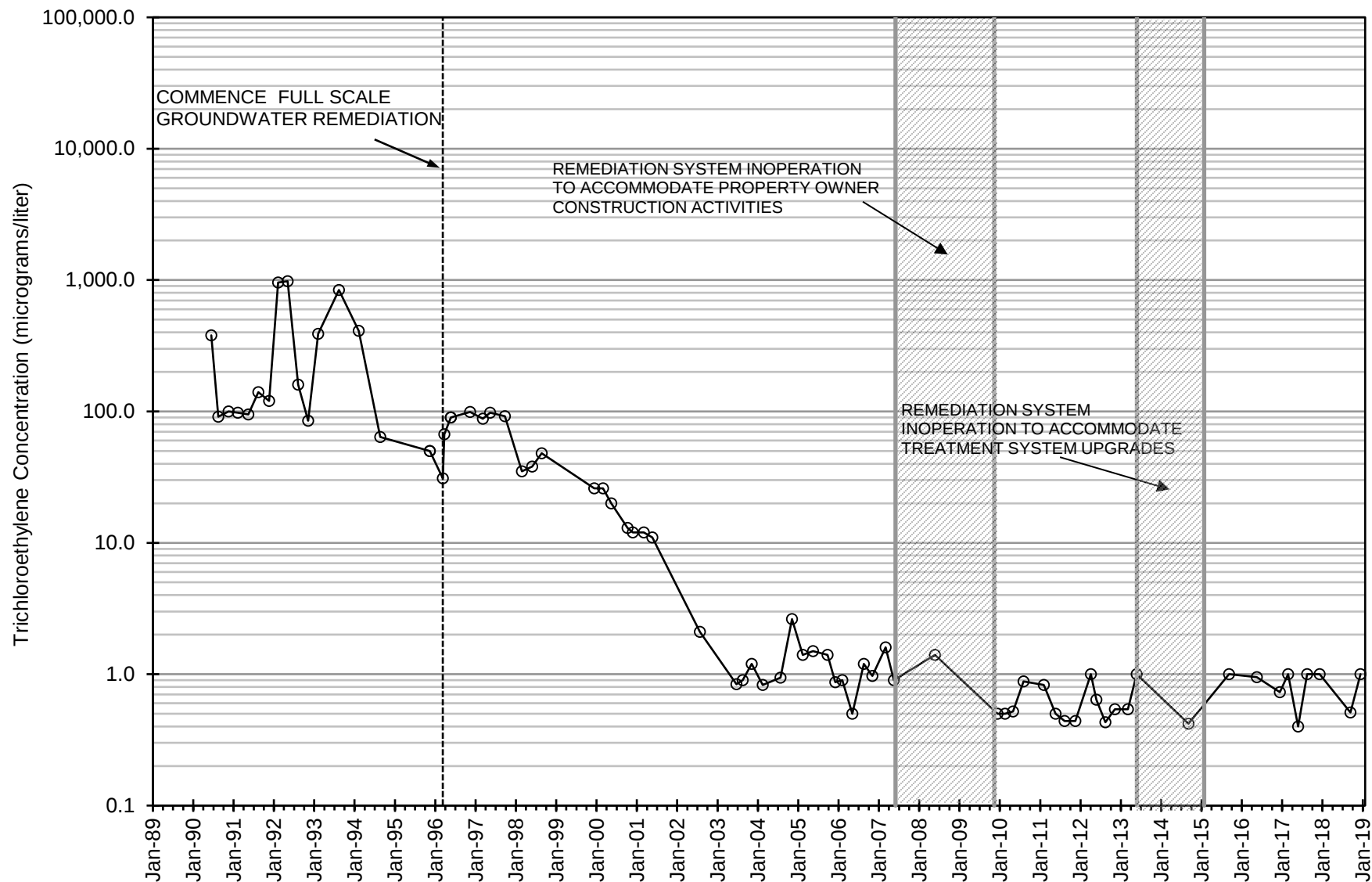
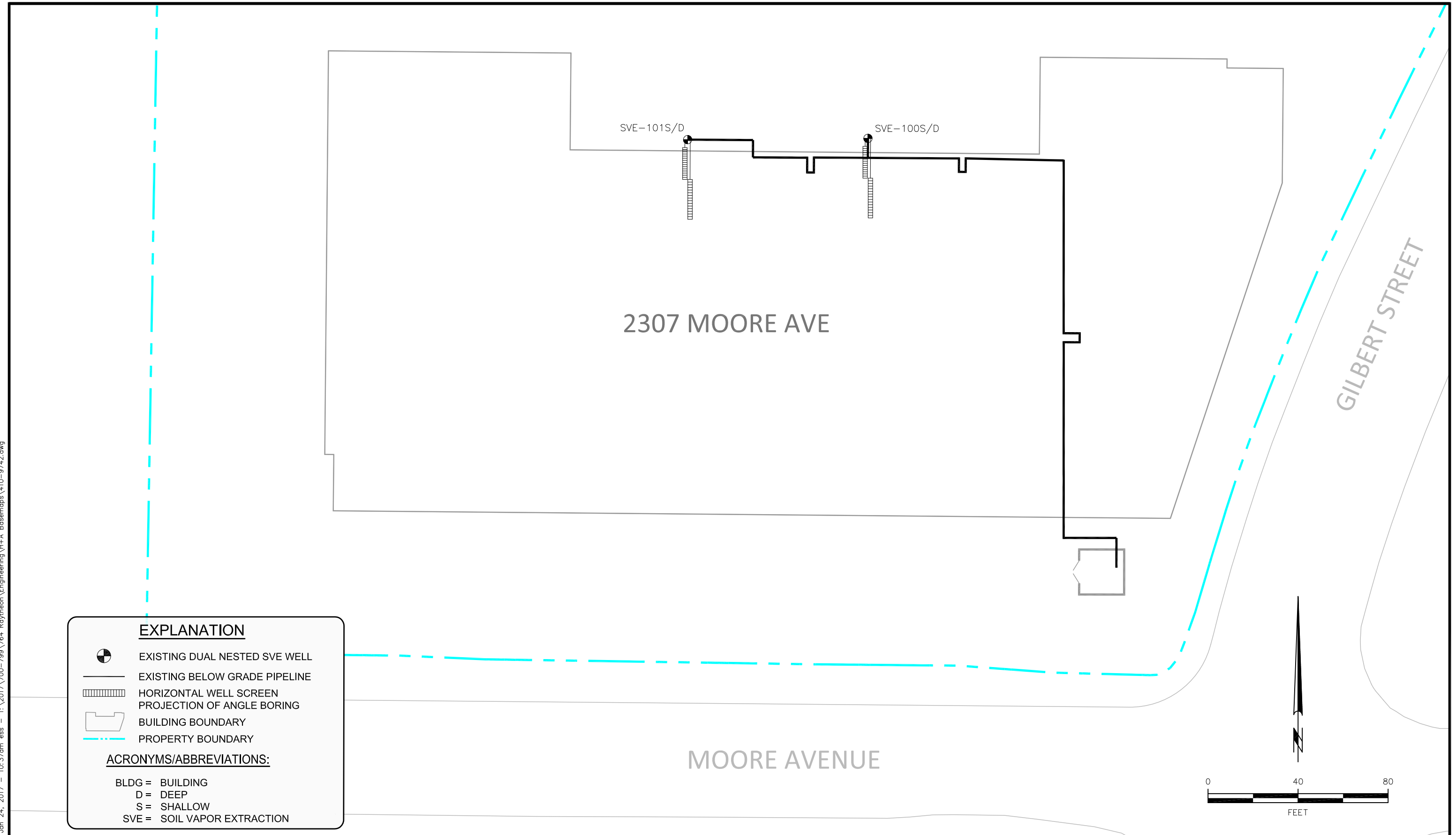


FIGURE 30. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL LAX-03

Jan 24, 2017 - 10:37am ess - T:\2017\700-799\764 Raytheon\Engineering\H+A Basemaps\410-9742.dwg



HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

FIG 31. SITE PLAN
FORMER BUILDING 684 SVE SYSTEM, FULLERTON CALIFORNIA

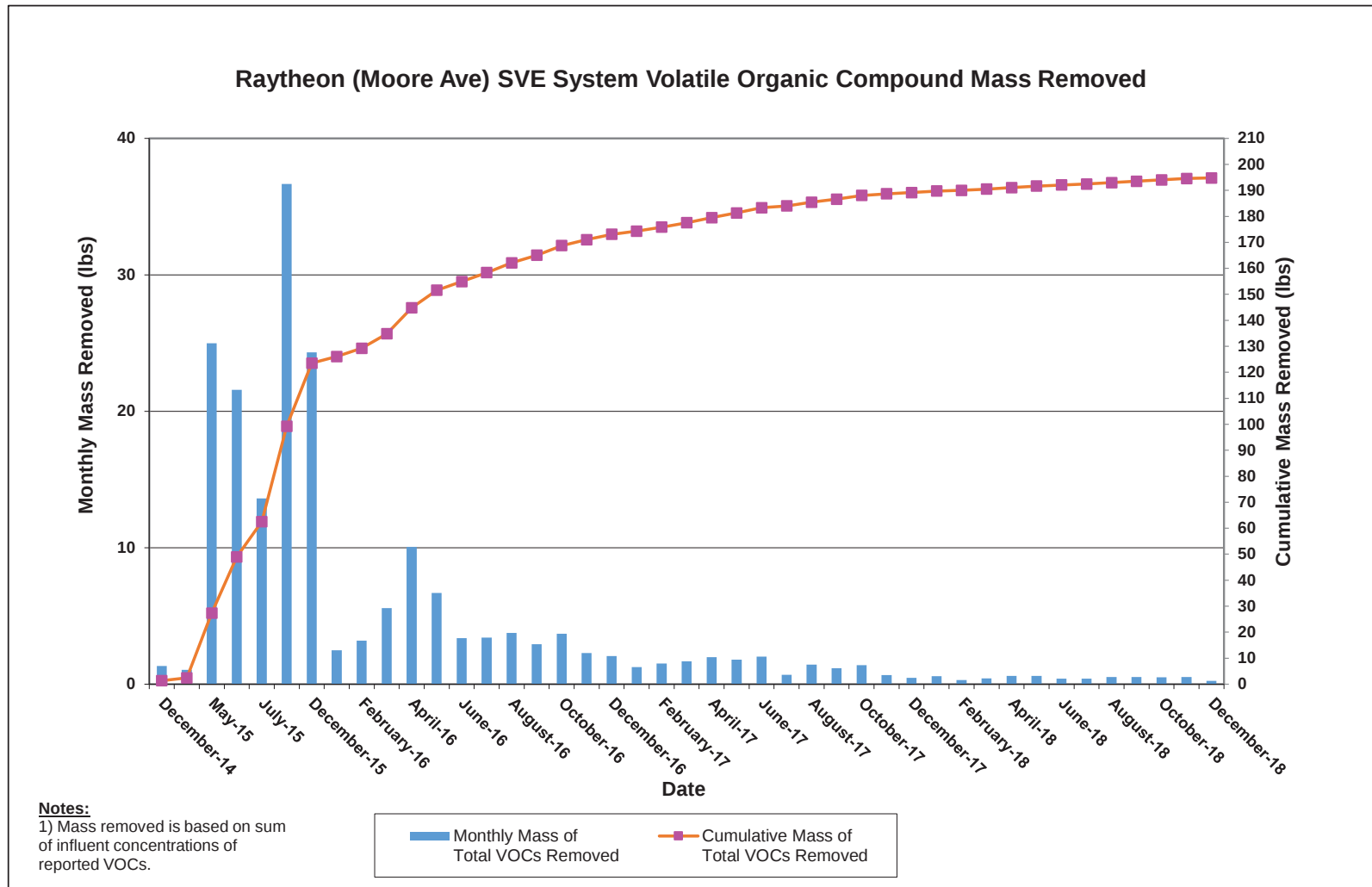


FIGURE 32. SVE SYSTEM CUMULATIVE VOC MASS REMOVED

APPENDIX A

LABORATORY ANALYTICAL DATA
(Provided on CD)

**WORK ORDER NUMBER: 18-09-1327***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** Hargis + Associates, Inc.**Client Project Name:** Building 684 - Raytheon / 764.10**Attention:** Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122-6215

A handwritten signature in black ink, appearing to read "Virendra Patel".

Approved for release on 09/27/2018 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon / 764.10
 Work Order Number: 18-09-1327

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	6
4	Client Sample Data.	10
	4.1 1,4-Dioxane by EPA 8270C (M) SIM Isotope Dilution (Aqueous).	10
	4.2 EPA 8260B Volatile Organics (Aqueous).	13
5	Quality Control Sample Data.	111
	5.1 MS/MSD.	111
	5.2 LCS/LCSD.	118
6	Sample Analysis Summary.	129
7	Glossary of Terms and Qualifiers.	130
8	Chain-of-Custody/Sample Receipt Form.	131

Work Order Narrative

Work Order: 18-09-1327Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/18/18. They were assigned to Work Order 18-09-1327.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: Hargis + Associates, Inc.	Work Order: 18-09-1327
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon / 764.10
San Diego, CA 92122-6215	PO Number:
	Date/Time Received: 09/18/18 18:00
	Number of Containers: 139
Attn: Ken Puentes	

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-091818	18-09-1327-1	09/18/18 08:25	2	Aqueous
S-2	18-09-1327-2	09/18/18 08:30	3	Aqueous
LAX-02	18-09-1327-3	09/18/18 09:05	4	Aqueous
UA-16D	18-09-1327-4	09/18/18 10:00	3	Aqueous
S-15	18-09-1327-5	09/18/18 09:25	3	Aqueous
UA-17D	18-09-1327-6	09/18/18 10:10	3	Aqueous
RB-091818B	18-09-1327-7	09/18/18 10:12	3	Aqueous
AB-08	18-09-1327-8	09/18/18 10:20	3	Aqueous
UB-06	18-09-1327-9	09/18/18 10:25	3	Aqueous
UB-02	18-09-1327-10	09/18/18 10:55	3	Aqueous
AB-05	18-09-1327-11	09/18/18 11:01	3	Aqueous
UA-13D	18-09-1327-12	09/18/18 11:07	3	Aqueous
AB-02	18-09-1327-13	09/18/18 12:22	3	Aqueous
UA-15D	18-09-1327-14	09/18/18 12:30	3	Aqueous
S-24	18-09-1327-15	09/18/18 12:36	3	Aqueous
UAX-03	18-09-1327-16	09/18/18 12:41	4	Aqueous
LAX-01	18-09-1327-17	09/18/18 13:24	4	Aqueous
UB-05	18-09-1327-18	09/18/18 14:01	3	Aqueous
RB-091818C	18-09-1327-19	09/18/18 14:11	4	Aqueous
AB-07	18-09-1327-20	09/18/18 14:15	3	Aqueous
UA-14D	18-09-1327-21	09/18/18 14:28	3	Aqueous
UA-1400D	18-09-1327-22	09/18/18 14:30	3	Aqueous
HEW-04	18-09-1327-23	09/18/18 15:00	4	Aqueous
HEW-0400	18-09-1327-24	09/18/18 15:02	4	Aqueous
UA-10D	18-09-1327-25	09/18/18 15:30	3	Aqueous
AB-06	18-09-1327-26	09/18/18 15:40	3	Aqueous
UB-04	18-09-1327-27	09/18/18 15:51	3	Aqueous
S-3	18-09-1327-28	09/18/18 08:50	3	Aqueous
S-32	18-09-1327-29	09/18/18 09:15	3	Aqueous
UA-4D	18-09-1327-30	09/18/18 09:55	3	Aqueous
UAX-01	18-09-1327-31	09/18/18 10:10	4	Aqueous
HEW-01	18-09-1327-32	09/18/18 10:50	4	Aqueous
S-18	18-09-1327-33	09/18/18 11:15	3	Aqueous
UA-12	18-09-1327-34	09/18/18 12:25	3	Aqueous
UA-12D	18-09-1327-35	09/18/18 12:35	3	Aqueous
RB-091818A	18-09-1327-36	09/18/18 12:45	3	Aqueous
S-29	18-09-1327-37	09/18/18 13:00	3	Aqueous
UA-11D	18-09-1327-38	09/18/18 13:20	3	Aqueous
UA-11	18-09-1327-39	09/18/18 13:55	3	Aqueous
S-30	18-09-1327-40	09/18/18 13:35	3	Aqueous
UA-7D	18-09-1327-41	09/18/18 14:50	3	Aqueous
UA-7	18-09-1327-42	09/18/18 15:05	3	Aqueous


[Return to Contents](#)

Sample Summary

Client: Hargis + Associates, Inc.	Work Order: 18-09-1327
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon / 764.10
San Diego, CA 92122-6215	PO Number:
	Date/Time Received: 09/18/18 18:00
	Number of Containers: 139

Attn: Ken Puentes

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
UA-8D	18-09-1327-43	09/18/18 15:40	3	Aqueous
UA-8	18-09-1327-44	09/18/18 15:55	3	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1327
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/18/18

Attn: Ken Puentes

Page 1 of 4

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
S-2 (18-09-1327-2)						
Trichloroethene	5.3		1.0	ug/L	EPA 8260B	EPA 5030C
UA-16D (18-09-1327-4)						
Tetrachloroethene	0.77	J	0.33*	ug/L	EPA 8260B	EPA 5030C
S-15 (18-09-1327-5)						
1,1-Dichloroethene	0.34	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
UA-17D (18-09-1327-6)						
Acetone	10	J	10*	ug/L	EPA 8260B	EPA 5030C
Carbon Disulfide	1.3	J	0.68*	ug/L	EPA 8260B	EPA 5030C
Methyl-t-Butyl Ether (MTBE)	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
RB-091818B (18-09-1327-7)						
Acetone	15	J	10*	ug/L	EPA 8260B	EPA 5030C
AB-08 (18-09-1327-8)						
c-1,2-Dichloroethene	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
UB-06 (18-09-1327-9)						
Acetone	13	J	10*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	4.5		1.0	ug/L	EPA 8260B	EPA 5030C
UB-02 (18-09-1327-10)						
Acetone	14	J	10*	ug/L	EPA 8260B	EPA 5030C
AB-05 (18-09-1327-11)						
Acetone	18	J	10*	ug/L	EPA 8260B	EPA 5030C
AB-02 (18-09-1327-13)						
Carbon Disulfide	0.92	J	0.68*	ug/L	EPA 8260B	EPA 5030C
c-1,2-Dichloroethene	4.6		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	13		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.5		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	13		1.0	ug/L	EPA 8260B	EPA 5030C
UA-15D (18-09-1327-14)						
Acetone	12	J	10*	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	0.44	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	1.5		1.0	ug/L	EPA 8260B	EPA 5030C
S-24 (18-09-1327-15)						
Acetone	18	J	10*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	5.3		1.0	ug/L	EPA 8260B	EPA 5030C
UAX-03 (18-09-1327-16)						
Acetone	16	J	10*	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	0.76	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	12		1.0	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1327
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/18/18

Attn: Ken Puentes

Page 2 of 4

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
LAX-01 (18-09-1327-17)						
Acetone	20	J	10*	ug/L	EPA 8260B	EPA 5030C
UB-05 (18-09-1327-18)						
Acetone	15	J	10*	ug/L	EPA 8260B	EPA 5030C
c-1,2-Dichloroethene	1.0		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.37	J	0.33*	ug/L	EPA 8260B	EPA 5030C
RB-091818C (18-09-1327-19)						
Acetone	18	J	10*	ug/L	EPA 8260B	EPA 5030C
AB-07 (18-09-1327-20)						
Acetone	18	J	10*	ug/L	EPA 8260B	EPA 5030C
c-1,2-Dichloroethene	2.8		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	2.7		1.0	ug/L	EPA 8260B	EPA 5030C
Isopropylbenzene	0.27	J	0.27*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	8.7		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	5.4		1.0	ug/L	EPA 8260B	EPA 5030C
UA-14D (18-09-1327-21)						
Tetrachloroethene	25		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	1.6		1.0	ug/L	EPA 8260B	EPA 5030C
UA-1400D (18-09-1327-22)						
Acetone	13	J	10*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	42		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.82	J	0.33*	ug/L	EPA 8260B	EPA 5030C
HEW-04 (18-09-1327-23)						
1,1-Dichloroethene	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	160		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	3.2		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
HEW-0400 (18-09-1327-24)						
1,1-Dichloroethene	1.5		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	150		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	3.7		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
UA-10D (18-09-1327-25)						
Tetrachloroethene	8.3		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.42	J	0.33*	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1327
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/18/18

Attn: Ken Puentes

Page 3 of 4

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
AB-06 (18-09-1327-26)						
c-1,2-Dichloroethene	2.9		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.42	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UB-04 (18-09-1327-27)						
c-1,2-Dichloroethene	0.90	J	0.34*	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	2.2		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.71	J	0.33*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	9.6		1.0	ug/L	EPA 8260B	EPA 5030C
S-3 (18-09-1327-28)						
Trichloroethene	2.7		1.0	ug/L	EPA 8260B	EPA 5030C
S-32 (18-09-1327-29)						
Tetrachloroethene	1.0		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	52		1.0	ug/L	EPA 8260B	EPA 5030C
UA-4D (18-09-1327-30)						
Acetone	12	J	10*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.39	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UAX-01 (18-09-1327-31)						
1,1-Dichloroethene	4.9		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	3.7		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	0.54	J	0.28*	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
HEW-01 (18-09-1327-32)						
1,1-Dichloroethene	6.3		5.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	6.5		5.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	640		5.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.9		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
S-18 (18-09-1327-33)						
Trichloroethene	0.78	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UA-12 (18-09-1327-34)						
Tetrachloroethene	0.90	J	0.33*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.37	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UA-12D (18-09-1327-35)						
Tetrachloroethene	0.73	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UA-11D (18-09-1327-38)						
Tetrachloroethene	0.53	J	0.33*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	1.2		1.0	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1327
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/18/18

Attn: Ken Puentes

Page 4 of 4

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
UA-11 (18-09-1327-39)						
Tetrachloroethene	4.1		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.92	J	0.33*	ug/L	EPA 8260B	EPA 5030C
S-30 (18-09-1327-40)						
Tetrachloroethene	1.2		1.0	ug/L	EPA 8260B	EPA 5030C
UA-7D (18-09-1327-41)						
1,1-Dichloroethane	0.54	J	0.42*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.80	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UA-7 (18-09-1327-42)						
1,1-Dichloroethane	1.9		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
UA-8D (18-09-1327-43)						
Trichloroethene	2.5		1.0	ug/L	EPA 8260B	EPA 5030C
UA-8 (18-09-1327-44)						
1,1-Dichloroethane	0.41	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	4.6		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-02	18-09-1327-3-D	09/18/18 09:05	Aqueous	GC/MS DDD	09/20/18	09/20/18 22:20	180920L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	69	56-123	
1,4-Dioxane-d8(IDS-IS)	41	30-120	

UAX-03	18-09-1327-16-D	09/18/18 12:41	Aqueous	GC/MS DDD	09/20/18	09/20/18 22:36	180920L02A
--------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	65	56-123	
1,4-Dioxane-d8(IDS-IS)	41	30-120	

LAX-01	18-09-1327-17-D	09/18/18 13:24	Aqueous	GC/MS DDD	09/20/18	09/20/18 22:52	180920L02A
--------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	75	56-123	
1,4-Dioxane-d8(IDS-IS)	40	30-120	

RB-091818C	18-09-1327-19-D	09/18/18 14:11	Aqueous	GC/MS DDD	09/20/18	09/20/18 23:07	180920L02A
------------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	60	56-123	
1,4-Dioxane-d8(IDS-IS)	43	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-04	18-09-1327-23-D	09/18/18 15:00	Aqueous	GC/MS DDD	09/20/18	09/20/18 23:24	180920L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	3.2	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	64	56-123	
1,4-Dioxane-d8(IDS-IS)	45	30-120	

HEW-0400	18-09-1327-24-D	09/18/18 15:02	Aqueous	GC/MS DDD	09/20/18	09/20/18 23:39	180920L02A
----------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	3.7	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	67	56-123	
1,4-Dioxane-d8(IDS-IS)	39	30-120	

UAX-01	18-09-1327-31-D	09/18/18 10:10	Aqueous	GC/MS DDD	09/20/18	09/20/18 23:55	180920L02A
--------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	0.54	1.0	0.28	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	61	56-123	
1,4-Dioxane-d8(IDS-IS)	34	30-120	

HEW-01	18-09-1327-32-D	09/18/18 10:50	Aqueous	GC/MS DDD	09/20/18	09/21/18 00:11	180920L02A
--------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.9	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	63	56-123	
1,4-Dioxane-d8(IDS-IS)	38	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-216-1494	N/A	Aqueous	GC/MS DDD	09/20/18	09/20/18 13:58	180920L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,4-Dioxane	ND	1.0	0.28	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Nitrobenzene-d5	75	56-123	
1,4-Dioxane-d8(IDS-IS)	34	30-120	

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-091818	18-09-1327-1-A	09/18/18 08:25	Aqueous	GC/MS Z	09/24/18	09/24/18 21:21	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	98	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-2	18-09-1327-2-A	09/18/18 08:30	Aqueous	GC/MS Z	09/24/18	09/24/18 22:00	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 4 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	5.3	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 5 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-02	18-09-1327-3-A	09/18/18 09:05	Aqueous	GC/MS Z	09/24/18	09/24/18 22:30	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 6 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 7 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-16D	18-09-1327-4-A	09/18/18 10:00	Aqueous	GC/MS Z	09/24/18	09/24/18 23:00	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 8 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.77	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 9 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-15	18-09-1327-5-A	09/18/18 09:25	Aqueous	GC/MS Z	09/24/18	09/24/18 23:30	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.34	1.0	0.34	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 10 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	2.1	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 11 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-17D	18-09-1327-6-A	09/18/18 10:10	Aqueous	GC/MS Z	09/24/18	09/25/18 00:00	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	10	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	1.3	10	0.68	1.00	J
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 12 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	1.7	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	101	80-128	
1,2-Dichloroethane-d4	101	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 13 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-091818B	18-09-1327-7-A	09/18/18 10:12	Aqueous	GC/MS Z	09/24/18	09/25/18 00:29	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	15	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 14 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	100	80-128	
1,2-Dichloroethane-d4	100	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 15 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-08	18-09-1327-8-B	09/18/18 10:20	Aqueous	GC/MS Z	09/25/18	09/25/18 23:43	180925L036

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	1.7	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 16 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	98	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 17 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-06	18-09-1327-9-A	09/18/18 10:25	Aqueous	GC/MS Z	09/24/18	09/25/18 01:29	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	13	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 18 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	4.5	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	101	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 19 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-02	18-09-1327-10-A	09/18/18 10:55	Aqueous	GC/MS Z	09/24/18	09/25/18 01:59	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	14	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 20 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 21 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-05	18-09-1327-11-A	09/18/18 11:01	Aqueous	GC/MS Z	09/24/18	09/25/18 02:29	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	18	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 22 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 23 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-13D	18-09-1327-12-A	09/18/18 11:07	Aqueous	GC/MS Z	09/24/18	09/25/18 02:59	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 24 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	98	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 25 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-02	18-09-1327-13-B	09/18/18 12:22	Aqueous	GC/MS Z	09/25/18	09/26/18 00:13	180925L036

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	0.92	10	0.68	1.00	J
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	4.6	1.0	0.34	1.00	
t-1,2-Dichloroethene	13	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 26 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	1.5	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	13	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	100	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 27 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-15D	18-09-1327-14-A	09/18/18 12:30	Aqueous	GC/MS Z	09/24/18	09/25/18 03:58	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	12	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.44	1.0	0.34	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 28 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	1.5	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	100	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 29 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-24	18-09-1327-15-A	09/18/18 12:36	Aqueous	GC/MS Z	09/24/18	09/25/18 04:28	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	18	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 30 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	5.3	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 31 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-03	18-09-1327-16-A	09/18/18 12:41	Aqueous	GC/MS Z	09/24/18	09/25/18 04:58	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	16	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.76	1.0	0.34	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 32 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	12	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 33 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-01	18-09-1327-17-A	09/18/18 13:24	Aqueous	GC/MS Z	09/24/18	09/25/18 05:28	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	20	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 34 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	98	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 35 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-05	18-09-1327-18-A	09/18/18 14:01	Aqueous	GC/MS Z	09/24/18	09/25/18 09:27	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	15	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	1.0	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 36 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.37	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 37 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-091818C	18-09-1327-19-A	09/18/18 14:11	Aqueous	GC/MS Z	09/24/18	09/25/18 09:57	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	18	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 38 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	101	80-128	
1,2-Dichloroethane-d4	101	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 39 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-07	18-09-1327-20-A	09/18/18 14:15	Aqueous	GC/MS Z	09/24/18	09/25/18 10:27	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	18	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	2.8	1.0	0.34	1.00	
t-1,2-Dichloroethene	2.7	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 40 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	0.27	1.0	0.27	1.00	J
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	8.7	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	5.4	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 41 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-14D	18-09-1327-21-A	09/18/18 14:28	Aqueous	GC/MS Z	09/24/18	09/25/18 10:57	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 42 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	25	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	1.6	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 43 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-1400D	18-09-1327-22-A	09/18/18 14:30	Aqueous	GC/MS Z	09/24/18	09/25/18 11:26	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	13	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 44 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	42	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.82	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	98	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 45 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-04	18-09-1327-23-A	09/18/18 15:00	Aqueous	GC/MS Z	09/24/18	09/25/18 11:56	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	1.7	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 46 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	2.1	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	160	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	99	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 47 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-0400	18-09-1327-24-A	09/18/18 15:02	Aqueous	GC/MS Z	09/24/18	09/25/18 12:26	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	1.5	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 48 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	1.7	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	150	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	100	80-129	
Toluene-d8	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 49 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-10D	18-09-1327-25-A	09/18/18 15:30	Aqueous	GC/MS CC	09/25/18	09/25/18 14:29	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 50 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	8.3	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.42	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	115	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 51 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-06	18-09-1327-26-A	09/18/18 15:40	Aqueous	GC/MS CC	09/25/18	09/25/18 15:02	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	2.9	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 52 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.42	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	114	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 53 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-04	18-09-1327-27-A	09/18/18 15:51	Aqueous	GC/MS CC	09/25/18	09/25/18 15:35	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	0.90	1.0	0.34	1.00	J
t-1,2-Dichloroethene	2.2	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 54 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.71	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	9.6	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	113	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 55 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	18-09-1327-28-A	09/18/18 08:50	Aqueous	GC/MS CC	09/25/18	09/25/18 16:08	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 56 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	2.7	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	114	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 57 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-32	18-09-1327-29-A	09/18/18 09:15	Aqueous	GC/MS CC	09/25/18	09/25/18 16:42	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 58 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	1.0	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	52	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	115	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 59 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-4D	18-09-1327-30-A	09/18/18 09:55	Aqueous	GC/MS CC	09/25/18	09/25/18 17:15	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	12	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 60 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.39	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	116	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 61 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-01	18-09-1327-31-A	09/18/18 10:10	Aqueous	GC/MS CC	09/25/18	09/25/18 17:48	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	4.9	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Page 62 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	3.7	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	111	80-128	
1,2-Dichloroethane-d4	116	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 63 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-01	18-09-1327-32-A	09/18/18 10:50	Aqueous	GC/MS CC	09/25/18	09/25/18 11:43	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	100	50	5.00	
Benzene	ND	5.0	1.5	5.00	
Bromobenzene	ND	5.0	1.6	5.00	
Bromochloromethane	ND	10	3.0	5.00	
Bromodichloromethane	ND	5.0	1.7	5.00	
Bromoform	ND	25	8.6	5.00	
Bromomethane	ND	250	92	5.00	
2-Butanone	ND	100	35	5.00	
n-Butylbenzene	ND	5.0	1.5	5.00	
sec-Butylbenzene	ND	5.0	1.4	5.00	
tert-Butylbenzene	ND	5.0	1.8	5.00	
Carbon Disulfide	ND	50	3.4	5.00	
Carbon Tetrachloride	ND	10	5.2	5.00	
Chlorobenzene	ND	5.0	1.5	5.00	
Chloroethane	ND	25	3.7	5.00	
Chloroform	ND	5.0	1.7	5.00	
Chloromethane	ND	50	3.0	5.00	
2-Chlorotoluene	ND	5.0	1.5	5.00	
4-Chlorotoluene	ND	5.0	1.4	5.00	
Dibromochloromethane	ND	10	2.6	5.00	
1,2-Dibromo-3-Chloropropane	ND	25	10	5.00	
1,2-Dibromoethane	ND	5.0	2.0	5.00	
Dibromomethane	ND	5.0	2.2	5.00	
1,2-Dichlorobenzene	ND	5.0	1.4	5.00	
1,3-Dichlorobenzene	ND	5.0	1.4	5.00	
1,4-Dichlorobenzene	ND	5.0	1.6	5.00	
Dichlorodifluoromethane	ND	25	7.4	5.00	
1,1-Dichloroethane	ND	5.0	2.1	5.00	
1,2-Dichloroethane	ND	5.0	1.6	5.00	
1,1-Dichloroethene	6.3	5.0	1.7	5.00	
c-1,2-Dichloroethene	ND	5.0	1.7	5.00	
t-1,2-Dichloroethene	ND	5.0	2.3	5.00	
1,2-Dichloropropane	ND	5.0	1.7	5.00	
1,3-Dichloropropane	ND	5.0	1.4	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 64 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	5.0	2.1	5.00	
1,1-Dichloropropene	ND	5.0	1.5	5.00	
c-1,3-Dichloropropene	ND	2.5	1.4	5.00	
t-1,3-Dichloropropene	ND	2.5	1.2	5.00	
Ethylbenzene	ND	5.0	1.3	5.00	
2-Hexanone	ND	50	25	5.00	
Isopropylbenzene	ND	5.0	1.4	5.00	
p-Isopropyltoluene	ND	5.0	1.5	5.00	
Methylene Chloride	ND	50	20	5.00	
4-Methyl-2-Pentanone	ND	50	2.3	5.00	
Naphthalene	ND	50	25	5.00	
n-Propylbenzene	ND	5.0	1.3	5.00	
Styrene	ND	5.0	1.2	5.00	
1,1,1,2-Tetrachloroethane	ND	10	2.5	5.00	
1,1,2,2-Tetrachloroethane	ND	50	1.6	5.00	
Tetrachloroethene	6.5	5.0	1.7	5.00	
Toluene	ND	5.0	1.4	5.00	
1,2,3-Trichlorobenzene	ND	5.0	1.5	5.00	
1,2,4-Trichlorobenzene	ND	5.0	1.7	5.00	
1,1,1-Trichloroethane	ND	5.0	1.9	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	3.3	5.00	
1,1,2-Trichloroethane	ND	5.0	1.6	5.00	
Trichloroethene	640	5.0	1.6	5.00	
Trichlorofluoromethane	ND	50	8.8	5.00	
1,2,3-Trichloropropane	ND	25	1.5	5.00	
1,2,4-Trimethylbenzene	ND	5.0	1.5	5.00	
1,3,5-Trimethylbenzene	ND	5.0	1.4	5.00	
Vinyl Acetate	ND	50	13	5.00	
Vinyl Chloride	ND	25	7.1	5.00	
p/m-Xylene	ND	10	2.8	5.00	
o-Xylene	ND	5.0	1.3	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1.5	5.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	113	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 65 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-18	18-09-1327-33-A	09/18/18 11:15	Aqueous	GC/MS CC	09/25/18	09/25/18 18:21	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 66 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.78	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	115	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 67 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-12	18-09-1327-34-A	09/18/18 12:25	Aqueous	GC/MS CC	09/25/18	09/25/18 18:54	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 68 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.90	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.37	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	112	80-128	
1,2-Dichloroethane-d4	114	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 69 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-12D	18-09-1327-35-A	09/18/18 12:35	Aqueous	GC/MS CC	09/25/18	09/25/18 19:27	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 70 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.73	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	115	80-129	
Toluene-d8	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 71 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-091818A	18-09-1327-36-A	09/18/18 12:45	Aqueous	GC/MS CC	09/25/18	09/25/18 20:00	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 72 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	115	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 73 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-29	18-09-1327-37-B	09/18/18 13:00	Aqueous	GC/MS QQ	09/26/18	09/27/18 00:18	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 74 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	92	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 75 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-11D	18-09-1327-38-A	09/18/18 13:20	Aqueous	GC/MS QQ	09/26/18	09/27/18 02:09	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 76 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.53	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	1.2	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	91	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 77 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-11	18-09-1327-39-A	09/18/18 13:55	Aqueous	GC/MS QQ	09/26/18	09/27/18 02:37	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 78 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	4.1	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.92	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	92	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 79 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-30	18-09-1327-40-A	09/18/18 13:35	Aqueous	GC/MS QQ	09/26/18	09/27/18 03:04	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 80 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	1.2	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	92	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 81 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-7D	18-09-1327-41-A	09/18/18 14:50	Aqueous	GC/MS QQ	09/26/18	09/27/18 03:32	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	0.54	1.0	0.42	1.00	J
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 82 of 98

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.80	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	92	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 83 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-7	18-09-1327-42-A	09/18/18 15:05	Aqueous	GC/MS QQ	09/26/18	09/27/18 04:00	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	1.9	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 84 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	2.1	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	93	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 85 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-8D	18-09-1327-43-A	09/18/18 15:40	Aqueous	GC/MS QQ	09/26/18	09/27/18 04:27	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 86 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	2.5	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	91	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 87 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-8	18-09-1327-44-A	09/18/18 15:55	Aqueous	GC/MS QQ	09/26/18	09/27/18 04:55	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.41	1.0	0.34	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 88 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	4.6	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	93	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 89 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26976	N/A	Aqueous	GC/MS Z	09/24/18	09/24/18 20:42	180924L020

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 90 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	101	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 91 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26987	N/A	Aqueous	GC/MS Z	09/24/18	09/25/18 08:57	180924L034

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 92 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	100	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 93 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26982	N/A	Aqueous	GC/MS CC	09/25/18	09/25/18 11:10	180925L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 94 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	114	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 95 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26985	N/A	Aqueous	GC/MS Z	09/25/18	09/25/18 18:44	180925L036

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 96 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	98	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 97 of 98

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26994	N/A	Aqueous	GC/MS QQ	09/26/18	09/26/18 23:51	180926L042

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 98 of 98

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	92	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 3510C
Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-09-1320-1	Sample	Aqueous	GC/MS DDD	09/20/18	09/20/18 17:06	180920S02
18-09-1320-1	Matrix Spike	Aqueous	GC/MS DDD	09/20/18	09/20/18 14:29	180920S02
18-09-1320-1	Matrix Spike Duplicate	Aqueous	GC/MS DDD	09/20/18	09/20/18 14:45	180920S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	538.8	20.00	626.4	438	457.4	0	50-130	31	0-20	3,4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-09-1406-4	Sample	Aqueous	GC/MS Z	09/25/18	09/25/18 19:14	180925S024
18-09-1406-4	Matrix Spike	Aqueous	GC/MS Z	09/25/18	09/25/18 19:44	180925S024
18-09-1406-4	Matrix Spike Duplicate	Aqueous	GC/MS Z	09/25/18	09/25/18 20:14	180925S024

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	37.88	76	42.45	85	34-166	11	0-33	
Benzene	ND	50.00	51.00	102	51.54	103	75-125	1	0-20	
Bromobenzene	ND	50.00	54.24	108	54.53	109	75-125	1	0-20	
Bromochloromethane	ND	50.00	55.66	111	53.66	107	75-125	4	0-20	
Bromodichloromethane	ND	50.00	54.90	110	56.04	112	75-134	2	0-20	
Bromoform	ND	50.00	42.13	84	43.54	87	74-134	3	0-20	
Bromomethane	ND	50.00	45.01	90	46.67	93	20-168	4	0-40	
2-Butanone	ND	50.00	44.27	89	42.77	86	37-157	3	0-20	
n-Butylbenzene	ND	50.00	55.61	111	56.62	113	73-145	2	0-20	
sec-Butylbenzene	ND	50.00	52.51	105	53.24	106	75-135	1	0-20	
tert-Butylbenzene	ND	50.00	56.37	113	55.26	111	75-136	2	0-20	
Carbon Disulfide	ND	50.00	49.09	98	48.10	96	50-152	2	0-27	
Carbon Tetrachloride	ND	50.00	48.63	97	48.70	97	70-154	0	0-20	
Chlorobenzene	ND	50.00	51.82	104	52.98	106	75-125	2	0-20	
Chloroethane	ND	50.00	47.94	96	47.70	95	41-167	1	0-26	
Chloroform	ND	50.00	53.20	106	51.79	104	75-127	3	0-20	
Chloromethane	ND	50.00	50.93	102	51.81	104	41-149	2	0-20	
2-Chlorotoluene	ND	50.00	57.63	115	57.57	115	75-128	0	0-20	
4-Chlorotoluene	ND	50.00	54.21	108	55.85	112	75-125	3	0-20	
Dibromochloromethane	ND	50.00	46.76	94	49.68	99	75-131	6	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	44.41	89	43.36	87	64-142	2	0-20	
1,2-Dibromoethane	ND	50.00	51.75	103	51.05	102	75-129	1	0-20	
Dibromomethane	ND	50.00	51.91	104	53.80	108	75-125	4	0-20	
1,2-Dichlorobenzene	ND	50.00	52.10	104	53.20	106	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	52.84	106	54.33	109	75-125	3	0-20	
1,4-Dichlorobenzene	ND	50.00	50.47	101	52.35	105	75-125	4	0-20	
Dichlorodifluoromethane	ND	50.00	47.09	94	46.26	93	25-157	2	0-26	
1,1-Dichloroethane	ND	50.00	44.46	89	43.41	87	73-139	2	0-20	
1,2-Dichloroethane	ND	50.00	54.17	108	53.79	108	75-125	1	0-20	
1,1-Dichloroethene	ND	50.00	54.60	109	53.45	107	61-145	2	0-20	
c-1,2-Dichloroethene	ND	50.00	53.34	107	51.70	103	75-125	3	0-20	
t-1,2-Dichloroethene	ND	50.00	52.75	105	52.03	104	64-142	1	0-20	
1,2-Dichloropropane	ND	50.00	53.99	108	54.17	108	75-127	0	0-20	
1,3-Dichloropropane	ND	50.00	50.83	102	51.29	103	75-125	1	0-20	
2,2-Dichloropropane	ND	50.00	54.88	110	53.70	107	24-180	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 7

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	54.59	109	55.09	110	75-135	1	0-20	
c-1,3-Dichloropropene	ND	50.00	53.78	108	53.50	107	75-137	1	0-20	
t-1,3-Dichloropropene	ND	50.00	48.62	97	49.12	98	74-146	1	0-20	
Ethylbenzene	ND	50.00	55.91	112	55.65	111	75-129	0	0-20	
2-Hexanone	ND	50.00	44.49	89	45.38	91	47-161	2	0-20	
Isopropylbenzene	ND	50.00	54.39	109	54.65	109	75-135	0	0-20	
p-Isopropyltoluene	ND	50.00	53.44	107	54.14	108	75-136	1	0-20	
Methylene Chloride	ND	50.00	51.06	102	49.93	100	63-141	2	0-20	
4-Methyl-2-Pentanone	ND	50.00	48.61	97	48.51	97	66-138	0	0-20	
Naphthalene	ND	50.00	48.43	97	49.71	99	59-143	3	0-20	
n-Propylbenzene	ND	50.00	56.39	113	56.52	113	75-133	0	0-20	
Styrene	ND	50.00	55.07	110	55.03	110	70-142	0	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	49.16	98	49.25	98	75-139	0	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	47.29	95	48.65	97	61-145	3	0-20	
Tetrachloroethene	ND	50.00	47.62	95	47.68	95	47-143	0	0-20	
Toluene	ND	50.00	56.28	113	55.71	111	75-125	1	0-20	
1,2,3-Trichlorobenzene	ND	50.00	52.79	106	54.00	108	73-133	2	0-20	
1,2,4-Trichlorobenzene	ND	50.00	54.33	109	54.91	110	71-137	1	0-20	
1,1,1-Trichloroethane	ND	50.00	52.29	105	51.18	102	75-136	2	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	55.94	112	52.87	106	42-168	6	0-22	
1,1,2-Trichloroethane	ND	50.00	51.64	103	51.16	102	75-125	1	0-20	
Trichloroethene	ND	50.00	54.68	109	54.13	108	67-139	1	0-20	
Trichlorofluoromethane	ND	50.00	55.03	110	55.16	110	59-155	0	0-20	
1,2,3-Trichloropropane	ND	50.00	49.42	99	49.53	99	75-127	0	0-20	
1,2,4-Trimethylbenzene	ND	50.00	51.46	103	52.13	104	75-133	1	0-20	
1,3,5-Trimethylbenzene	ND	50.00	53.90	108	53.30	107	75-135	1	0-20	
Vinyl Acetate	ND	50.00	42.70	85	47.07	94	54-180	10	0-25	
Vinyl Chloride	ND	50.00	49.55	99	50.76	102	51-153	2	0-20	
p/m-Xylene	ND	100.0	116.8	117	116.9	117	75-133	0	0-20	
o-Xylene	ND	50.00	56.72	113	56.56	113	75-134	0	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	41.96	84	41.43	83	64-136	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Page 4 of 7

Quality Control Sample ID	Type		Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number		
HEW-01	Sample		Aqueous		GC/MS CC	09/25/18	09/25/18 11:43	180925S018		
HEW-01	Matrix Spike		Aqueous		GC/MS CC	09/25/18	09/25/18 12:16	180925S018		
HEW-01	Matrix Spike Duplicate		Aqueous		GC/MS CC	09/25/18	09/25/18 12:49	180925S018		
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	250.0	220.2	88	211.4	85	34-166	4	0-33	
Benzene	ND	250.0	259.3	104	250.7	100	75-125	3	0-20	
Bromobenzene	ND	250.0	259.1	104	247.2	99	75-125	5	0-20	
Bromochloromethane	ND	250.0	274.9	110	260.5	104	75-125	5	0-20	
Bromodichloromethane	ND	250.0	285.4	114	270.6	108	75-134	5	0-20	
Bromoform	ND	250.0	259.2	104	249.9	100	74-134	4	0-20	
Bromomethane	ND	250.0	230.8	92	230.9	92	20-168	0	0-40	
2-Butanone	ND	250.0	256.5	103	263.0	105	37-157	3	0-20	
n-Butylbenzene	ND	250.0	292.1	117	281.6	113	73-145	4	0-20	
sec-Butylbenzene	ND	250.0	280.0	112	270.7	108	75-135	3	0-20	
tert-Butylbenzene	ND	250.0	275.1	110	268.8	108	75-136	2	0-20	
Carbon Disulfide	ND	250.0	218.8	88	211.5	85	50-152	3	0-27	
Carbon Tetrachloride	ND	250.0	287.8	115	277.2	111	70-154	4	0-20	
Chlorobenzene	ND	250.0	261.4	105	249.2	100	75-125	5	0-20	
Chloroethane	ND	250.0	281.4	113	285.8	114	41-167	2	0-26	
Chloroform	ND	250.0	274.3	110	263.5	105	75-127	4	0-20	
Chloromethane	ND	250.0	275.7	110	293.1	117	41-149	6	0-20	
2-Chlorotoluene	ND	250.0	271.0	108	256.4	103	75-128	6	0-20	
4-Chlorotoluene	ND	250.0	273.0	109	261.9	105	75-125	4	0-20	
Dibromochloromethane	ND	250.0	268.9	108	254.2	102	75-131	6	0-20	
1,2-Dibromo-3-Chloropropane	ND	250.0	255.2	102	251.8	101	64-142	1	0-20	
1,2-Dibromoethane	ND	250.0	252.2	101	249.6	100	75-129	1	0-20	
Dibromomethane	ND	250.0	259.8	104	250.6	100	75-125	4	0-20	
1,2-Dichlorobenzene	ND	250.0	263.9	106	254.9	102	75-125	3	0-20	
1,3-Dichlorobenzene	ND	250.0	257.5	103	247.6	99	75-125	4	0-20	
1,4-Dichlorobenzene	ND	250.0	251.3	101	240.8	96	75-125	4	0-20	
Dichlorodifluoromethane	ND	250.0	306.3	123	309.0	124	25-157	1	0-26	
1,1-Dichloroethane	ND	250.0	242.1	97	232.5	93	73-139	4	0-20	
1,2-Dichloroethane	ND	250.0	283.9	114	269.2	108	75-125	5	0-20	
1,1-Dichloroethene	6.278	250.0	277.6	109	268.5	105	61-145	3	0-20	
c-1,2-Dichloroethene	ND	250.0	273.3	109	261.0	104	75-125	5	0-20	
t-1,2-Dichloroethene	ND	250.0	257.8	103	249.5	100	64-142	3	0-20	
1,2-Dichloropropane	ND	250.0	271.4	109	263.7	105	75-127	3	0-20	
1,3-Dichloropropane	ND	250.0	270.6	108	255.6	102	75-125	6	0-20	
2,2-Dichloropropane	ND	250.0	322.9	129	307.1	123	24-180	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 5 of 7

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	250.0	265.9	106	255.7	102	75-135	4	0-20	
c-1,3-Dichloropropene	ND	250.0	290.5	116	278.4	111	75-137	4	0-20	
t-1,3-Dichloropropene	ND	250.0	298.2	119	281.0	112	74-146	6	0-20	
Ethylbenzene	ND	250.0	273.5	109	260.5	104	75-129	5	0-20	
2-Hexanone	ND	250.0	248.7	99	237.4	95	47-161	5	0-20	
Isopropylbenzene	ND	250.0	282.3	113	266.0	106	75-135	6	0-20	
p-Isopropyltoluene	ND	250.0	280.7	112	268.4	107	75-136	4	0-20	
Methylene Chloride	ND	250.0	251.1	100	244.8	98	63-141	3	0-20	
4-Methyl-2-Pentanone	ND	250.0	250.0	100	244.9	98	66-138	2	0-20	
Naphthalene	ND	250.0	238.2	95	248.2	99	59-143	4	0-20	
n-Propylbenzene	ND	250.0	286.5	115	269.5	108	75-133	6	0-20	
Styrene	ND	250.0	277.7	111	264.5	106	70-142	5	0-28	
1,1,1,2-Tetrachloroethane	ND	250.0	268.4	107	257.3	103	75-139	4	0-20	
1,1,2,2-Tetrachloroethane	ND	250.0	251.9	101	248.0	99	61-145	2	0-20	
Tetrachloroethene	6.532	250.0	262.0	102	242.8	94	47-143	8	0-20	
Toluene	ND	250.0	266.9	107	256.8	103	75-125	4	0-20	
1,2,3-Trichlorobenzene	ND	250.0	253.3	101	256.9	103	73-133	1	0-20	
1,2,4-Trichlorobenzene	ND	250.0	266.8	107	264.0	106	71-137	1	0-20	
1,1,1-Trichloroethane	ND	250.0	278.8	112	266.0	106	75-136	5	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	250.0	261.3	105	248.4	99	42-168	5	0-22	
1,1,2-Trichloroethane	ND	250.0	257.5	103	245.2	98	75-125	5	0-20	
Trichloroethene	644.1	250.0	868.9	90	865.6	89	67-139	0	0-20	
Trichlorofluoromethane	ND	250.0	324.0	130	322.0	129	59-155	1	0-20	
1,2,3-Trichloropropane	ND	250.0	264.9	106	252.8	101	75-127	5	0-20	
1,2,4-Trimethylbenzene	ND	250.0	272.0	109	262.3	105	75-133	4	0-20	
1,3,5-Trimethylbenzene	ND	250.0	280.6	112	265.1	106	75-135	6	0-20	
Vinyl Acetate	ND	250.0	240.9	96	232.5	93	54-180	4	0-25	
Vinyl Chloride	ND	250.0	293.6	117	307.7	123	51-153	5	0-20	
p/m-Xylene	ND	500.0	554.6	111	527.1	105	75-133	5	0-20	
o-Xylene	ND	250.0	285.0	114	269.9	108	75-134	5	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	250.0	228.2	91	224.8	90	64-136	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Page 6 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-29	Sample	Aqueous	GC/MS QQ	09/26/18	09/27/18 00:18	180926S012
S-29	Matrix Spike	Aqueous	GC/MS QQ	09/26/18	09/27/18 00:46	180926S012
S-29	Matrix Spike Duplicate	Aqueous	GC/MS QQ	09/26/18	09/27/18 01:14	180926S012

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	46.86	94	47.26	95	34-166	1	0-33	
Benzene	ND	50.00	45.80	92	46.41	93	75-125	1	0-20	
Bromobenzene	ND	50.00	49.29	99	50.08	100	75-125	2	0-20	
Bromochloromethane	ND	50.00	49.61	99	49.39	99	75-125	0	0-20	
Bromodichloromethane	ND	50.00	49.19	98	49.79	100	75-134	1	0-20	
Bromoform	ND	50.00	48.08	96	48.98	98	74-134	2	0-20	
Bromomethane	ND	50.00	48.97	98	50.24	100	20-168	3	0-40	
2-Butanone	ND	50.00	48.14	96	47.40	95	37-157	2	0-20	
n-Butylbenzene	ND	50.00	45.52	91	47.19	94	73-145	4	0-20	
sec-Butylbenzene	ND	50.00	47.99	96	49.93	100	75-135	4	0-20	
tert-Butylbenzene	ND	50.00	49.71	99	51.63	103	75-136	4	0-20	
Carbon Disulfide	ND	50.00	46.42	93	47.65	95	50-152	3	0-27	
Carbon Tetrachloride	ND	50.00	46.46	93	48.41	97	70-154	4	0-20	
Chlorobenzene	ND	50.00	48.15	96	48.92	98	75-125	2	0-20	
Chloroethane	ND	50.00	54.74	109	66.97	134	41-167	20	0-26	
Chloroform	ND	50.00	47.48	95	47.51	95	75-127	0	0-20	
Chloromethane	ND	50.00	40.08	80	42.42	85	41-149	6	0-20	
2-Chlorotoluene	ND	50.00	45.85	92	47.16	94	75-128	3	0-20	
4-Chlorotoluene	ND	50.00	46.53	93	47.79	96	75-125	3	0-20	
Dibromochloromethane	ND	50.00	51.72	103	52.68	105	75-131	2	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	51.37	103	51.35	103	64-142	0	0-20	
1,2-Dibromoethane	ND	50.00	51.72	103	51.61	103	75-129	0	0-20	
Dibromomethane	ND	50.00	50.84	102	50.70	101	75-125	0	0-20	
1,2-Dichlorobenzene	ND	50.00	48.73	97	49.51	99	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	47.53	95	48.50	97	75-125	2	0-20	
1,4-Dichlorobenzene	ND	50.00	46.77	94	47.83	96	75-125	2	0-20	
Dichlorodifluoromethane	ND	50.00	46.34	93	48.11	96	25-157	4	0-26	
1,1-Dichloroethane	ND	50.00	41.30	83	41.85	84	73-139	1	0-20	
1,2-Dichloroethane	ND	50.00	48.05	96	47.89	96	75-125	0	0-20	
1,1-Dichloroethene	ND	50.00	45.94	92	46.78	94	61-145	2	0-20	
c-1,2-Dichloroethene	ND	50.00	48.38	97	48.32	97	75-125	0	0-20	
t-1,2-Dichloroethene	ND	50.00	47.85	96	48.97	98	64-142	2	0-20	
1,2-Dichloropropane	ND	50.00	48.80	98	49.57	99	75-127	2	0-20	
1,3-Dichloropropane	ND	50.00	49.33	99	48.90	98	75-125	1	0-20	
2,2-Dichloropropane	ND	50.00	38.67	77	40.19	80	24-180	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 7 of 7

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	47.31	95	48.51	97	75-135	2	0-20	
c-1,3-Dichloropropene	ND	50.00	48.38	97	48.61	97	75-137	0	0-20	
t-1,3-Dichloropropene	ND	50.00	48.67	97	49.13	98	74-146	1	0-20	
Ethylbenzene	ND	50.00	47.56	95	48.95	98	75-129	3	0-20	
2-Hexanone	ND	50.00	49.63	99	50.17	100	47-161	1	0-20	
Isopropylbenzene	ND	50.00	47.92	96	49.27	99	75-135	3	0-20	
p-Isopropyltoluene	ND	50.00	47.55	95	49.10	98	75-136	3	0-20	
Methylene Chloride	ND	50.00	48.08	96	48.10	96	63-141	0	0-20	
4-Methyl-2-Pentanone	ND	50.00	50.83	102	51.17	102	66-138	1	0-20	
Naphthalene	ND	50.00	51.56	103	52.29	105	59-143	1	0-20	
n-Propylbenzene	ND	50.00	46.58	93	48.22	96	75-133	3	0-20	
Styrene	ND	50.00	47.20	94	48.33	97	70-142	2	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	50.53	101	51.74	103	75-139	2	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	53.81	108	53.62	107	61-145	0	0-20	
Tetrachloroethene	ND	50.00	42.30	85	43.10	86	47-143	2	0-20	
Toluene	ND	50.00	48.35	97	49.34	99	75-125	2	0-20	
1,2,3-Trichlorobenzene	ND	50.00	47.51	95	48.20	96	73-133	1	0-20	
1,2,4-Trichlorobenzene	ND	50.00	45.98	92	45.99	92	71-137	0	0-20	
1,1,1-Trichloroethane	ND	50.00	45.22	90	46.64	93	75-136	3	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	45.13	90	45.94	92	42-168	2	0-22	
1,1,2-Trichloroethane	ND	50.00	50.29	101	50.07	100	75-125	0	0-20	
Trichloroethene	ND	50.00	47.97	96	49.06	98	67-139	2	0-20	
Trichlorofluoromethane	ND	50.00	47.11	94	49.30	99	59-155	5	0-20	
1,2,3-Trichloropropane	ND	50.00	46.65	93	46.81	94	75-127	0	0-20	
1,2,4-Trimethylbenzene	ND	50.00	47.58	95	48.67	97	75-133	2	0-20	
1,3,5-Trimethylbenzene	ND	50.00	46.94	94	48.56	97	75-135	3	0-20	
Vinyl Acetate	ND	50.00	45.54	91	46.56	93	54-180	2	0-25	
Vinyl Chloride	ND	50.00	50.64	101	53.12	106	51-153	5	0-20	
p/m-Xylene	ND	100.0	89.44	89	92.09	92	75-133	3	0-20	
o-Xylene	ND	50.00	46.03	92	47.33	95	75-134	3	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	40.40	81	40.60	81	64-136	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-216-1494	LCS	Aqueous	GC/MS DDD	09/20/18	09/20/18 14:14	180920L02A
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
1,4-Dioxane		20.00	16.07	80	50-130	



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-001-26976	LCS	Aqueous	GC/MS Z	09/24/18	09/24/18 18:43	180924L020
099-14-001-26976	LCSD	Aqueous	GC/MS Z	09/24/18	09/24/18 19:13	180924L020

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	45.67	91	44.35	89	53-137	39-151	3	0-21	
Benzene	50.00	45.78	92	46.87	94	79-121	72-128	2	0-20	
Bromobenzene	50.00	51.54	103	51.29	103	80-120	73-127	0	0-20	
Bromochloromethane	50.00	50.55	101	50.47	101	80-122	73-129	0	0-20	
Bromodichloromethane	50.00	51.00	102	51.70	103	80-124	73-131	1	0-20	
Bromoform	50.00	45.47	91	46.46	93	73-127	64-136	2	0-20	
Bromomethane	50.00	39.81	80	38.86	78	50-150	33-167	2	0-26	
2-Butanone	50.00	46.47	93	46.52	93	60-126	49-137	0	0-20	
n-Butylbenzene	50.00	51.32	103	50.94	102	72-138	61-149	1	0-20	
sec-Butylbenzene	50.00	49.12	98	48.86	98	77-131	68-140	1	0-20	
tert-Butylbenzene	50.00	50.00	100	49.44	99	80-125	72-132	1	0-20	
Carbon Disulfide	50.00	43.57	87	42.74	85	50-150	33-167	2	0-22	
Carbon Tetrachloride	50.00	45.93	92	44.93	90	65-143	52-156	2	0-20	
Chlorobenzene	50.00	49.86	100	49.33	99	80-120	73-127	1	0-20	
Chloroethane	50.00	40.72	81	40.07	80	62-128	51-139	2	0-20	
Chloroform	50.00	49.22	98	48.63	97	80-120	73-127	1	0-20	
Chloromethane	50.00	43.52	87	42.97	86	43-133	28-148	1	0-20	
2-Chlorotoluene	50.00	53.47	107	53.25	107	80-121	73-128	0	0-20	
4-Chlorotoluene	50.00	52.19	104	52.57	105	80-120	73-127	1	0-20	
Dibromochloromethane	50.00	47.74	95	48.46	97	80-123	73-130	2	0-20	
1,2-Dibromo-3-Chloropropane	50.00	47.78	96	45.98	92	66-126	56-136	4	0-20	
1,2-Dibromoethane	50.00	48.85	98	50.07	100	80-120	73-127	2	0-20	
Dibromomethane	50.00	48.33	97	50.13	100	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	51.98	104	51.71	103	80-120	73-127	1	0-20	
1,3-Dichlorobenzene	50.00	51.41	103	50.93	102	80-120	73-127	1	0-20	
1,4-Dichlorobenzene	50.00	49.50	99	48.99	98	80-120	73-127	1	0-20	
Dichlorodifluoromethane	50.00	34.41	69	34.09	68	50-150	33-167	1	0-30	
1,1-Dichloroethane	50.00	42.34	85	39.75	79	72-126	63-135	6	0-20	
1,2-Dichloroethane	50.00	49.80	100	50.54	101	76-120	69-127	1	0-20	
1,1-Dichloroethene	50.00	47.75	95	46.38	93	66-132	55-143	3	0-20	
c-1,2-Dichloroethene	50.00	48.76	98	48.21	96	78-120	71-127	1	0-20	
t-1,2-Dichloroethene	50.00	48.65	97	47.02	94	66-132	55-143	3	0-20	
1,2-Dichloropropane	50.00	49.00	98	50.01	100	80-120	73-127	2	0-20	
1,3-Dichloropropane	50.00	49.47	99	49.73	99	80-120	73-127	1	0-20	
2,2-Dichloropropane	50.00	49.01	98	47.33	95	50-150	33-167	3	0-20	
1,1-Dichloropropene	50.00	49.37	99	48.58	97	75-123	67-131	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 11

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	50.01	100	50.65	101	77-131	68-140	1	0-20	
t-1,3-Dichloropropene	50.00	47.15	94	48.20	96	76-136	66-146	2	0-20	
Ethylbenzene	50.00	52.11	104	51.87	104	80-120	73-127	0	0-20	
2-Hexanone	50.00	44.99	90	47.06	94	63-123	53-133	5	0-20	
Isopropylbenzene	50.00	49.45	99	50.26	101	80-128	72-136	2	0-20	
p-Isopropyltoluene	50.00	49.12	98	49.83	100	73-133	63-143	1	0-20	
Methylene Chloride	50.00	46.49	93	45.41	91	61-133	49-145	2	0-27	
4-Methyl-2-Pentanone	50.00	46.81	94	47.82	96	65-125	55-135	2	0-20	
Naphthalene	50.00	49.01	98	49.99	100	69-129	59-139	2	0-20	
n-Propylbenzene	50.00	50.91	102	50.89	102	80-128	72-136	0	0-20	
Styrene	50.00	51.95	104	52.08	104	80-126	72-134	0	0-20	
1,1,1,2-Tetrachloroethane	50.00	47.45	95	49.20	98	80-129	72-137	4	0-20	
1,1,2,2-Tetrachloroethane	50.00	46.01	92	47.23	94	74-122	66-130	3	0-20	
Tetrachloroethene	50.00	56.77	114	56.43	113	55-139	41-153	1	0-23	
Toluene	50.00	50.71	101	50.97	102	80-120	73-127	1	0-20	
1,2,3-Trichlorobenzene	50.00	51.39	103	51.60	103	72-132	62-142	0	0-20	
1,2,4-Trichlorobenzene	50.00	52.02	104	52.10	104	74-134	64-144	0	0-20	
1,1,1-Trichloroethane	50.00	47.92	96	47.33	95	76-124	68-132	1	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	46.93	94	46.54	93	54-150	38-166	1	0-30	
1,1,2-Trichloroethane	50.00	50.69	101	50.48	101	80-120	73-127	0	0-20	
Trichloroethene	50.00	49.19	98	49.86	100	79-121	72-128	1	0-20	
Trichlorofluoromethane	50.00	48.97	98	47.65	95	72-132	62-142	3	0-20	
1,2,3-Trichloropropane	50.00	50.00	100	50.54	101	75-123	67-131	1	0-20	
1,2,4-Trimethylbenzene	50.00	48.92	98	48.79	98	74-128	65-137	0	0-20	
1,3,5-Trimethylbenzene	50.00	50.12	100	49.83	100	77-131	68-140	1	0-20	
Vinyl Acetate	50.00	44.18	88	45.55	91	50-150	33-167	3	0-20	
Vinyl Chloride	50.00	42.52	85	40.77	82	63-129	52-140	4	0-20	
p/m-Xylene	100.0	108.7	109	108.5	108	80-122	73-129	0	0-20	
o-Xylene	50.00	52.46	105	52.88	106	80-128	72-136	1	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	40.90	82	40.65	81	69-123	60-132	1	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Page 4 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-001-26987	LCS	Aqueous	GC/MS Z	09/24/18	09/25/18 06:58	180924L034
099-14-001-26987	LCSD	Aqueous	GC/MS Z	09/24/18	09/25/18 07:27	180924L034

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	40.89	82	46.03	92	53-137	39-151	12	0-21	
Benzene	50.00	47.96	96	47.63	95	79-121	72-128	1	0-20	
Bromobenzene	50.00	52.05	104	50.91	102	80-120	73-127	2	0-20	
Bromochloromethane	50.00	50.73	101	52.75	106	80-122	73-129	4	0-20	
Bromodichloromethane	50.00	52.78	106	52.66	105	80-124	73-131	0	0-20	
Bromoform	50.00	43.73	87	43.71	87	73-127	64-136	0	0-20	
Bromomethane	50.00	42.38	85	42.72	85	50-150	33-167	1	0-26	
2-Butanone	50.00	45.60	91	45.33	91	60-126	49-137	1	0-20	
n-Butylbenzene	50.00	50.05	100	49.56	99	72-138	61-149	1	0-20	
sec-Butylbenzene	50.00	49.03	98	48.11	96	77-131	68-140	2	0-20	
tert-Butylbenzene	50.00	51.02	102	49.62	99	80-125	72-132	3	0-20	
Carbon Disulfide	50.00	44.45	89	44.20	88	50-150	33-167	1	0-22	
Carbon Tetrachloride	50.00	45.23	90	45.33	91	65-143	52-156	0	0-20	
Chlorobenzene	50.00	50.76	102	49.64	99	80-120	73-127	2	0-20	
Chloroethane	50.00	44.68	89	45.06	90	62-128	51-139	1	0-20	
Chloroform	50.00	50.04	100	50.22	100	80-120	73-127	0	0-20	
Chloromethane	50.00	47.95	96	47.68	95	43-133	28-148	1	0-20	
2-Chlorotoluene	50.00	53.42	107	52.32	105	80-121	73-128	2	0-20	
4-Chlorotoluene	50.00	52.65	105	51.60	103	80-120	73-127	2	0-20	
Dibromochloromethane	50.00	47.22	94	46.75	94	80-123	73-130	1	0-20	
1,2-Dibromo-3-Chloropropane	50.00	45.85	92	45.88	92	66-126	56-136	0	0-20	
1,2-Dibromoethane	50.00	51.27	103	50.01	100	80-120	73-127	2	0-20	
Dibromomethane	50.00	50.32	101	50.98	102	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	51.56	103	50.42	101	80-120	73-127	2	0-20	
1,3-Dichlorobenzene	50.00	51.45	103	50.33	101	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	50.00	49.10	98	48.29	97	80-120	73-127	2	0-20	
Dichlorodifluoromethane	50.00	44.18	88	43.70	87	50-150	33-167	1	0-30	
1,1-Dichloroethane	50.00	42.02	84	42.37	85	72-126	63-135	1	0-20	
1,2-Dichloroethane	50.00	50.80	102	51.28	103	76-120	69-127	1	0-20	
1,1-Dichloroethene	50.00	49.18	98	49.00	98	66-132	55-143	0	0-20	
c-1,2-Dichloroethene	50.00	48.88	98	49.67	99	78-120	71-127	2	0-20	
t-1,2-Dichloroethene	50.00	48.88	98	49.68	99	66-132	55-143	2	0-20	
1,2-Dichloropropane	50.00	50.64	101	50.46	101	80-120	73-127	0	0-20	
1,3-Dichloropropane	50.00	49.82	100	49.13	98	80-120	73-127	1	0-20	
2,2-Dichloropropane	50.00	36.94	74	36.71	73	50-150	33-167	1	0-20	
1,1-Dichloropropene	50.00	50.61	101	50.04	100	75-123	67-131	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 5 of 11

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	49.32	99	48.50	97	77-131	68-140	2	0-20	
t-1,3-Dichloropropene	50.00	45.95	92	44.61	89	76-136	66-146	3	0-20	
Ethylbenzene	50.00	52.78	106	51.51	103	80-120	73-127	2	0-20	
2-Hexanone	50.00	45.62	91	43.61	87	63-123	53-133	5	0-20	
Isopropylbenzene	50.00	50.85	102	49.63	99	80-128	72-136	2	0-20	
p-Isopropyltoluene	50.00	48.67	97	48.78	98	73-133	63-143	0	0-20	
Methylene Chloride	50.00	48.34	97	49.12	98	61-133	49-145	2	0-27	
4-Methyl-2-Pentanone	50.00	48.21	96	47.06	94	65-125	55-135	2	0-20	
Naphthalene	50.00	49.30	99	48.15	96	69-129	59-139	2	0-20	
n-Propylbenzene	50.00	51.23	102	50.12	100	80-128	72-136	2	0-20	
Styrene	50.00	52.88	106	52.42	105	80-126	72-134	1	0-20	
1,1,1,2-Tetrachloroethane	50.00	47.51	95	46.98	94	80-129	72-137	1	0-20	
1,1,2,2-Tetrachloroethane	50.00	46.95	94	46.03	92	74-122	66-130	2	0-20	
Tetrachloroethene	50.00	59.09	118	54.99	110	55-139	41-153	7	0-23	
Toluene	50.00	52.33	105	51.41	103	80-120	73-127	2	0-20	
1,2,3-Trichlorobenzene	50.00	50.82	102	50.34	101	72-132	62-142	1	0-20	
1,2,4-Trichlorobenzene	50.00	51.15	102	50.99	102	74-134	64-144	0	0-20	
1,1,1-Trichloroethane	50.00	48.87	98	48.84	98	76-124	68-132	0	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	46.35	93	46.96	94	54-150	38-166	1	0-30	
1,1,2-Trichloroethane	50.00	50.65	101	49.43	99	80-120	73-127	2	0-20	
Trichloroethene	50.00	51.05	102	50.29	101	79-121	72-128	2	0-20	
Trichlorofluoromethane	50.00	51.62	103	51.29	103	72-132	62-142	1	0-20	
1,2,3-Trichloropropane	50.00	47.84	96	48.01	96	75-123	67-131	0	0-20	
1,2,4-Trimethylbenzene	50.00	49.81	100	49.03	98	74-128	65-137	2	0-20	
1,3,5-Trimethylbenzene	50.00	50.05	100	49.69	99	77-131	68-140	1	0-20	
Vinyl Acetate	50.00	43.20	86	46.73	93	50-150	33-167	8	0-20	
Vinyl Chloride	50.00	47.83	96	47.48	95	63-129	52-140	1	0-20	
p/m-Xylene	100.0	110.1	110	108.5	108	80-122	73-129	1	0-20	
o-Xylene	50.00	53.85	108	52.52	105	80-128	72-136	2	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	41.03	82	41.92	84	69-123	60-132	2	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Page 6 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-001-26985	LCS	Aqueous	GC/MS Z	09/25/18	09/25/18 15:14	180925L036
099-14-001-26985	LCSD	Aqueous	GC/MS Z	09/25/18	09/25/18 15:44	180925L036

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	40.68	81	42.48	85	53-137	39-151	4	0-21	
Benzene	50.00	50.10	100	46.91	94	79-121	72-128	7	0-20	
Bromobenzene	50.00	57.48	115	53.24	106	80-120	73-127	8	0-20	
Bromochloromethane	50.00	55.67	111	53.91	108	80-122	73-129	3	0-20	
Bromodichloromethane	50.00	56.12	112	53.53	107	80-124	73-131	5	0-20	
Bromoform	50.00	44.95	90	43.51	87	73-127	64-136	3	0-20	
Bromomethane	50.00	48.91	98	45.26	91	50-150	33-167	8	0-26	
2-Butanone	50.00	45.78	92	45.24	90	60-126	49-137	1	0-20	
n-Butylbenzene	50.00	55.97	112	52.24	104	72-138	61-149	7	0-20	
sec-Butylbenzene	50.00	52.70	105	48.86	98	77-131	68-140	8	0-20	
tert-Butylbenzene	50.00	53.90	108	52.82	106	80-125	72-132	2	0-20	
Carbon Disulfide	50.00	46.59	93	42.70	85	50-150	33-167	9	0-22	
Carbon Tetrachloride	50.00	47.32	95	44.32	89	65-143	52-156	7	0-20	
Chlorobenzene	50.00	54.69	109	51.60	103	80-120	73-127	6	0-20	
Chloroethane	50.00	46.23	92	44.00	88	62-128	51-139	5	0-20	
Chloroform	50.00	52.89	106	50.79	102	80-120	73-127	4	0-20	
Chloromethane	50.00	51.54	103	47.88	96	43-133	28-148	7	0-20	
2-Chlorotoluene	50.00	59.89	120	55.44	111	80-121	73-128	8	0-20	
4-Chlorotoluene	50.00	56.51	113	53.46	107	80-120	73-127	6	0-20	
Dibromochloromethane	50.00	50.92	102	48.79	98	80-123	73-130	4	0-20	
1,2-Dibromo-3-Chloropropane	50.00	46.90	94	44.14	88	66-126	56-136	6	0-20	
1,2-Dibromoethane	50.00	54.25	109	52.14	104	80-120	73-127	4	0-20	
Dibromomethane	50.00	54.15	108	51.77	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	55.07	110	52.29	105	80-120	73-127	5	0-20	
1,3-Dichlorobenzene	50.00	55.38	111	52.08	104	80-120	73-127	6	0-20	
1,4-Dichlorobenzene	50.00	52.97	106	50.67	101	80-120	73-127	4	0-20	
Dichlorodifluoromethane	50.00	43.43	87	40.35	81	50-150	33-167	7	0-30	
1,1-Dichloroethane	50.00	44.84	90	42.30	85	72-126	63-135	6	0-20	
1,2-Dichloroethane	50.00	54.08	108	51.42	103	76-120	69-127	5	0-20	
1,1-Dichloroethene	50.00	50.79	102	47.48	95	66-132	55-143	7	0-20	
c-1,2-Dichloroethene	50.00	53.56	107	49.48	99	78-120	71-127	8	0-20	
t-1,2-Dichloroethene	50.00	50.37	101	48.34	97	66-132	55-143	4	0-20	
1,2-Dichloropropane	50.00	54.07	108	51.38	103	80-120	73-127	5	0-20	
1,3-Dichloropropane	50.00	53.23	106	50.63	101	80-120	73-127	5	0-20	
2,2-Dichloropropane	50.00	51.88	104	47.19	94	50-150	33-167	9	0-20	
1,1-Dichloropropene	50.00	53.43	107	49.20	98	75-123	67-131	8	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/18/18
Work Order: 18-09-1327
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 7 of 11

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	54.48	109	51.69	103	77-131	68-140	5	0-20	
t-1,3-Dichloropropene	50.00	52.04	104	49.06	98	76-136	66-146	6	0-20	
Ethylbenzene	50.00	57.05	114	52.77	106	80-120	73-127	8	0-20	
2-Hexanone	50.00	45.97	92	45.24	90	63-123	53-133	2	0-20	
Isopropylbenzene	50.00	54.96	110	50.94	102	80-128	72-136	8	0-20	
p-Isopropyltoluene	50.00	54.03	108	50.38	101	73-133	63-143	7	0-20	
Methylene Chloride	50.00	51.04	102	48.20	96	61-133	49-145	6	0-27	
4-Methyl-2-Pentanone	50.00	47.84	96	47.72	95	65-125	55-135	0	0-20	
Naphthalene	50.00	51.30	103	49.30	99	69-129	59-139	4	0-20	
n-Propylbenzene	50.00	56.27	113	52.68	105	80-128	72-136	7	0-20	
Styrene	50.00	57.55	115	54.57	109	80-126	72-134	5	0-20	
1,1,1,2-Tetrachloroethane	50.00	50.63	101	48.75	98	80-129	72-137	4	0-20	
1,1,2,2-Tetrachloroethane	50.00	49.77	100	46.63	93	74-122	66-130	7	0-20	
Tetrachloroethene	50.00	55.05	110	50.68	101	55-139	41-153	8	0-23	
Toluene	50.00	55.17	110	51.94	104	80-120	73-127	6	0-20	
1,2,3-Trichlorobenzene	50.00	55.76	112	53.32	107	72-132	62-142	4	0-20	
1,2,4-Trichlorobenzene	50.00	56.65	113	53.87	108	74-134	64-144	5	0-20	
1,1,1-Trichloroethane	50.00	50.64	101	47.07	94	76-124	68-132	7	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	49.40	99	44.39	89	54-150	38-166	11	0-30	
1,1,2-Trichloroethane	50.00	53.37	107	52.66	105	80-120	73-127	1	0-20	
Trichloroethene	50.00	53.90	108	50.79	102	79-121	72-128	6	0-20	
Trichlorofluoromethane	50.00	51.59	103	47.77	96	72-132	62-142	8	0-20	
1,2,3-Trichloropropane	50.00	52.13	104	51.47	103	75-123	67-131	1	0-20	
1,2,4-Trimethylbenzene	50.00	52.55	105	49.33	99	74-128	65-137	6	0-20	
1,3,5-Trimethylbenzene	50.00	55.18	110	51.98	104	77-131	68-140	6	0-20	
Vinyl Acetate	50.00	50.31	101	48.43	97	50-150	33-167	4	0-20	
Vinyl Chloride	50.00	48.87	98	44.98	90	63-129	52-140	8	0-20	
p/m-Xylene	100.0	119.1	119	111.6	112	80-122	73-129	7	0-20	
o-Xylene	50.00	58.17	116	54.04	108	80-128	72-136	7	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	42.80	86	41.63	83	69-123	60-132	3	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B

Page 8 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-26982	LCS	Aqueous	GC/MS CC	09/25/18	09/25/18 09:31	180925L003
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acetone	50.00	45.21	90	53-137	39-151	
Benzene	50.00	46.73	93	79-121	72-128	
Bromobenzene	50.00	48.56	97	80-120	73-127	
Bromochloromethane	50.00	51.41	103	80-122	73-129	
Bromodichloromethane	50.00	52.72	105	80-124	73-131	
Bromoform	50.00	48.99	98	73-127	64-136	
Bromomethane	50.00	41.75	83	50-150	33-167	
2-Butanone	50.00	52.60	105	60-126	49-137	
n-Butylbenzene	50.00	52.76	106	72-138	61-149	
sec-Butylbenzene	50.00	50.29	101	77-131	68-140	
tert-Butylbenzene	50.00	51.00	102	80-125	72-132	
Carbon Disulfide	50.00	38.70	77	50-150	33-167	
Carbon Tetrachloride	50.00	49.51	99	65-143	52-156	
Chlorobenzene	50.00	48.15	96	80-120	73-127	
Chloroethane	50.00	52.47	105	62-128	51-139	
Chloroform	50.00	50.15	100	80-120	73-127	
Chloromethane	50.00	52.89	106	43-133	28-148	
2-Chlorotoluene	50.00	49.92	100	80-121	73-128	
4-Chlorotoluene	50.00	50.00	100	80-120	73-127	
Dibromochloromethane	50.00	50.74	101	80-123	73-130	
1,2-Dibromo-3-Chloropropane	50.00	47.76	96	66-126	56-136	
1,2-Dibromoethane	50.00	48.50	97	80-120	73-127	
Dibromomethane	50.00	49.10	98	80-120	73-127	
1,2-Dichlorobenzene	50.00	49.36	99	80-120	73-127	
1,3-Dichlorobenzene	50.00	47.89	96	80-120	73-127	
1,4-Dichlorobenzene	50.00	46.40	93	80-120	73-127	
Dichlorodifluoromethane	50.00	52.82	106	50-150	33-167	
1,1-Dichloroethane	50.00	43.69	87	72-126	63-135	
1,2-Dichloroethane	50.00	52.23	104	76-120	69-127	
1,1-Dichloroethene	50.00	46.70	93	66-132	55-143	
c-1,2-Dichloroethene	50.00	49.41	99	78-120	71-127	
t-1,2-Dichloroethene	50.00	46.27	93	66-132	55-143	
1,2-Dichloropropane	50.00	50.23	100	80-120	73-127	
1,3-Dichloropropane	50.00	50.63	101	80-120	73-127	
2,2-Dichloropropane	50.00	57.56	115	50-150	33-167	
1,1-Dichloropropene	50.00	46.41	93	75-123	67-131	
c-1,3-Dichloropropene	50.00	53.89	108	77-131	68-140	
t-1,3-Dichloropropene	50.00	56.27	113	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 9 of 11

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	49.92	100	80-120	73-127	
2-Hexanone	50.00	48.33	97	63-123	53-133	
Isopropylbenzene	50.00	50.76	102	80-128	72-136	
p-Isopropyltoluene	50.00	50.23	100	73-133	63-143	
Methylene Chloride	50.00	46.74	93	61-133	49-145	
4-Methyl-2-Pentanone	50.00	47.11	94	65-125	55-135	
Naphthalene	50.00	48.39	97	69-129	59-139	
n-Propylbenzene	50.00	52.01	104	80-128	72-136	
Styrene	50.00	51.57	103	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	51.00	102	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	47.11	94	74-122	66-130	
Tetrachloroethene	50.00	45.69	91	55-139	41-153	
Toluene	50.00	48.27	97	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	48.98	98	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	50.39	101	74-134	64-144	
1,1,1-Trichloroethane	50.00	48.75	98	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	39.74	79	54-150	38-166	
1,1,2-Trichloroethane	50.00	49.33	99	80-120	73-127	
Trichloroethene	50.00	47.31	95	79-121	72-128	
Trichlorofluoromethane	50.00	55.46	111	72-132	62-142	
1,2,3-Trichloropropane	50.00	50.80	102	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	50.49	101	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	51.46	103	77-131	68-140	
Vinyl Acetate	50.00	47.75	96	50-150	33-167	
Vinyl Chloride	50.00	54.90	110	63-129	52-140	
p/m-Xylene	100.0	101.4	101	80-122	73-129	
o-Xylene	50.00	52.80	106	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	44.20	88	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B

Page 10 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-26994	LCS	Aqueous	GC/MS QQ	09/26/18	09/26/18 22:55	180926L042
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acetone	50.00	45.53	91	53-137	39-151	
Benzene	50.00	45.23	90	79-121	72-128	
Bromobenzene	50.00	49.64	99	80-120	73-127	
Bromochloromethane	50.00	48.63	97	80-122	73-129	
Bromodichloromethane	50.00	48.71	97	80-124	73-131	
Bromoform	50.00	48.63	97	73-127	64-136	
Bromomethane	50.00	49.97	100	50-150	33-167	
2-Butanone	50.00	47.23	94	60-126	49-137	
n-Butylbenzene	50.00	47.13	94	72-138	61-149	
sec-Butylbenzene	50.00	48.68	97	77-131	68-140	
tert-Butylbenzene	50.00	48.63	97	80-125	72-132	
Carbon Disulfide	50.00	44.54	89	50-150	33-167	
Carbon Tetrachloride	50.00	45.69	91	65-143	52-156	
Chlorobenzene	50.00	48.41	97	80-120	73-127	
Chloroethane	50.00	55.03	110	62-128	51-139	
Chloroform	50.00	46.44	93	80-120	73-127	
Chloromethane	50.00	40.06	80	43-133	28-148	
2-Chlorotoluene	50.00	46.58	93	80-121	73-128	
4-Chlorotoluene	50.00	47.49	95	80-120	73-127	
Dibromochloromethane	50.00	51.94	104	80-123	73-130	
1,2-Dibromo-3-Chloropropane	50.00	49.07	98	66-126	56-136	
1,2-Dibromoethane	50.00	51.48	103	80-120	73-127	
Dibromomethane	50.00	49.83	100	80-120	73-127	
1,2-Dichlorobenzene	50.00	49.47	99	80-120	73-127	
1,3-Dichlorobenzene	50.00	48.69	97	80-120	73-127	
1,4-Dichlorobenzene	50.00	48.33	97	80-120	73-127	
Dichlorodifluoromethane	50.00	45.98	92	50-150	33-167	
1,1-Dichloroethane	50.00	41.72	83	72-126	63-135	
1,2-Dichloroethane	50.00	47.21	94	76-120	69-127	
1,1-Dichloroethene	50.00	44.64	89	66-132	55-143	
c-1,2-Dichloroethene	50.00	47.72	95	78-120	71-127	
t-1,2-Dichloroethene	50.00	47.08	94	66-132	55-143	
1,2-Dichloropropane	50.00	48.76	98	80-120	73-127	
1,3-Dichloropropane	50.00	48.27	97	80-120	73-127	
2,2-Dichloropropane	50.00	40.50	81	50-150	33-167	
1,1-Dichloropropene	50.00	46.49	93	75-123	67-131	
c-1,3-Dichloropropene	50.00	48.75	98	77-131	68-140	
t-1,3-Dichloropropene	50.00	49.74	99	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/18/18
 Work Order: 18-09-1327
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 11 of 11

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	47.75	95	80-120	73-127	
2-Hexanone	50.00	48.99	98	63-123	53-133	
Isopropylbenzene	50.00	48.05	96	80-128	72-136	
p-Isopropyltoluene	50.00	48.42	97	73-133	63-143	
Methylene Chloride	50.00	47.80	96	61-133	49-145	
4-Methyl-2-Pentanone	50.00	49.88	100	65-125	55-135	
Naphthalene	50.00	52.47	105	69-129	59-139	
n-Propylbenzene	50.00	47.32	95	80-128	72-136	
Styrene	50.00	48.64	97	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	50.90	102	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	49.46	99	74-122	66-130	
Tetrachloroethene	50.00	55.10	110	55-139	41-153	
Toluene	50.00	47.80	96	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	49.15	98	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	48.28	97	74-134	64-144	
1,1,1-Trichloroethane	50.00	44.70	89	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	44.14	88	54-150	38-166	
1,1,2-Trichloroethane	50.00	49.67	99	80-120	73-127	
Trichloroethene	50.00	48.76	98	79-121	72-128	
Trichlorofluoromethane	50.00	46.40	93	72-132	62-142	
1,2,3-Trichloropropane	50.00	47.27	95	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	48.46	97	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	47.90	96	77-131	68-140	
Vinyl Acetate	50.00	45.53	91	50-150	33-167	
Vinyl Chloride	50.00	49.95	100	63-129	52-140	
p/m-Xylene	100.0	90.17	90	80-122	73-129	
o-Xylene	50.00	46.48	93	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	41.40	83	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Return to Contents

Sample Analysis Summary Report

Work Order: 18-09-1327

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	486	GC/MS CC	2
EPA 8260B	EPA 5030C	486	GC/MS QQ	2
EPA 8260B	EPA 5030C	1120	GC/MS Z	2
EPA 8260B	EPA 5030C	1126	GC/MS Z	2
EPA 8260B	EPA 5030C	1179	GC/MS CC	2
EPA 8270C (M) SIM Isotope Dil	EPA 3510C	1117	GC/MS DDD	1

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 18-09-1327

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



HARGIS + ASSOCIATES, INC.
HYDROBIOLOGY • ENGINEERING

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes

QA Manager Tyler Evans

Phone 858-455-6500

Date: 9/18/18
Page 4 of 4

18-09-1327

Laboratory

Eurofins Calscience, Inc
Attn: Virendra Patel

Project	Sampled By:	SAMPLE COLLECTION	
BCI Fullerton 764.10	A. DONNELLY A. JANZON	Date	Time
LAB ID	SAMPLE ID		
1	TR-091018	9/18/18	0825
2	S-2		0830
3	LAX-02		0905
4	↓		↓
5	UA-16D		1000
6	S-15		0925
7	UA-17D	1010	1010
8	RB-091810B	1012	1008
9	AB-08		1020
10	UB-06		1025
11	UB-02		1055
12	AB-05		1101
13	UA-13D		1107
14	AB-02	1222	1232
15	UA-15D		1230
16	S-24		1236
17	UAX-03		1241
18	↓		↓

Total number of containers per analysis:

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
A Donnelly / H+A	9/18/18 1655	Rudolf / EC	9/18/18 1655
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
Rudolf / EC	9/18/18 1800	EC	9/18/18 1800

MATRIX	PRESERVATION	CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION	SPECIAL HANDLING
Groundwater					
Lab prepared water	Hydrochloric Acid (HCl)	40-ml VOA	VOCs by EPA 8260B		
			1,4-Dioxane by 8270 MOD		
				0-10	
				10-100	
				100-1,000	
				>1,000	Standard TAT
					MS/MSD Requested

REMARKS

REPORT "J" FLAGS

LOG CODE: HARG

Geotracker ID:

T0605900143

Total No. of Containers:

☐ No. of containers correct
☐ Received in good condition
☐ Custody seals secure
☐ Conforms to COC document

Send Results to:

Ken Puentes

9171 Towne Centre Drive
Suite 375

San Diego, CA 92122

Ph: 858-455-6500

kpuentes@hargis.com

Temperature on receipt

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2CLIENT: MARGIS + ASSOCIATES, INC.DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.6 °C (w/ CF): 2.1 °C; ☐ Blank ☒ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ FilterChecked by: VAH1

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/AChecked by: VAH1Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/AChecked by: UFSO

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☒	☐	☐
COC document(s) received complete	☒	☐	☐

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished timeSampler's name indicated on COC ☒ Yes ☐ No ☐ N/ASample container label(s) consistent with COC ☒ Yes ☐ No ☐ N/ASample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/AProper containers for analyses requested ☒ Yes ☐ No ☐ N/ASufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/ASamples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/AProper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved MetalsAcid/base preserved samples - pH within acceptable range ☐ Yes ☐ No ☒ N/AContainer(s) for certain analysis free of headspace ☒ Yes ☐ No ☐ N/A☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)Tedlar™ bag(s) free of condensation ☐ Yes ☐ No ☒ N/ACONTAINER TYPE: 3(Trip Blank Lot Number: 180829B)Aqueous: ☐ VOA ☒ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☒ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB☐ 1AGB ☐ 1AGBna₂ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (____): ☐ _____ ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: UFSOs = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOHReviewed by: UGU

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: HARGIS + ASSOCIATES, INC.

DATE: 09/18/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.5 °C (w/ CF): 2.0 °C; ☐ Blank ☒ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: VAMI

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: VAMI

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: WFO

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☒	☐	☐
COC document(s) received complete	☒	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☒	☐	☐
Sample container label(s) consistent with COC	☒	☐	☐
Sample container(s) intact and in good condition	☒	☐	☐
Proper containers for analyses requested	☒	☐	☐
Sufficient volume/mass for analyses requested	☒	☐	☐
Samples received within holding time	☒	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☒
Proper preservation chemical(s) noted on COC and/or sample container	☒	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☒
Container(s) for certain analysis free of headspace	☒	☐	☐
☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☒

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☒ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBz₂na (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☒ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna₂ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (____): ☐ _____ ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO₃, **na** = NaOH, **na₂** = Na₂S₂O₃, **p** = H₃PO₄, Labeled/Checked by: WFO

s = H₂SO₄, **u** = ultra-pure, **x** = Na₂SO₃+NaHSO₄.H₂O, **z₂na** = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: WFO

**WORK ORDER NUMBER: 18-09-1373***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** Hargis + Associates, Inc.**Client Project Name:** Building 684 - Raytheon / 764.10**Attention:** Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122-6215

A handwritten signature in black ink, appearing to read "Virendra Patel".

Approved for release on 09/28/2018 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon / 764.10
 Work Order Number: 18-09-1373

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	7
	4.1 1,4-Dioxane by EPA 8270C (M) SIM Isotope Dilution (Aqueous).	7
	4.2 EPA 8260B Volatile Organics (Aqueous).	9
5	Quality Control Sample Data.	61
	5.1 MS/MSD.	61
	5.2 LCS/LCSD.	62
6	Sample Analysis Summary.	69
7	Glossary of Terms and Qualifiers.	70
8	Chain-of-Custody/Sample Receipt Form.	71

Work Order Narrative

Work Order: 18-09-1373

Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/19/18. They were assigned to Work Order 18-09-1373.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: Hargis + Associates, Inc.	Work Order: 18-09-1373
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon / 764.10
San Diego, CA 92122-6215	PO Number:
	Date/Time Received: 09/19/18 13:10
	Number of Containers: 75

Attn: Ken Puentes

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-091918	18-09-1373-1	09/19/18 08:00	3	Aqueous
UB-01	18-09-1373-2	09/19/18 08:28	3	Aqueous
S-04	18-09-1373-3	09/19/18 08:37	3	Aqueous
LAX-03	18-09-1373-4	09/19/18 09:08	4	Aqueous
RB-091918B	18-09-1373-5	09/19/18 09:22	4	Aqueous
AB-03	18-09-1373-6	09/19/18 09:34	3	Aqueous
S-14	18-09-1373-7	09/19/18 09:47	3	Aqueous
UAX-02	18-09-1373-8	09/19/18 10:02	4	Aqueous
UAX-0200	18-09-1373-9	09/19/18 10:04	4	Aqueous
UA-02	18-09-1373-10	09/19/18 10:30	3	Aqueous
S-07	18-09-1373-11	09/19/18 10:41	3	Aqueous
UB-03	18-09-1373-12	09/19/18 11:00	3	Aqueous
UA-6D	18-09-1373-13	09/19/18 08:20	3	Aqueous
UA-6	18-09-1373-14	09/19/18 08:30	3	Aqueous
RB-091918A	18-09-1373-15	09/19/18 08:45	4	Aqueous
AB-1	18-09-1373-16	09/19/18 09:00	3	Aqueous
S-26	18-09-1373-17	09/19/18 09:10	3	Aqueous
S-31	18-09-1373-18	09/19/18 09:30	3	Aqueous
S-27	18-09-1373-19	09/19/18 09:50	3	Aqueous
SE-1	18-09-1373-20	09/19/18 10:05	3	Aqueous
S-8	18-09-1373-21	09/19/18 10:15	3	Aqueous
S-800	18-09-1373-22	09/19/18 10:20	3	Aqueous
HEW-3	18-09-1373-23	09/19/18 10:40	4	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1373
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/19/18

Attn: Ken Puentes

Page 1 of 2

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
S-04 (18-09-1373-3)						
Tetrachloroethene	0.54	J	0.33*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	36		1.0	ug/L	EPA 8260B	EPA 5030C
LAX-03 (18-09-1373-4)						
Trichloroethene	0.51	J	0.33*	ug/L	EPA 8260B	EPA 5030C
AB-03 (18-09-1373-6)						
Trichloroethene	0.44	J	0.33*	ug/L	EPA 8260B	EPA 5030C
S-14 (18-09-1373-7)						
Trichloroethene	1.0		1.0	ug/L	EPA 8260B	EPA 5030C
UAX-02 (18-09-1373-8)						
1,1-Dichloroethene	5.0		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	4.5		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.3		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
UAX-0200 (18-09-1373-9)						
1,1-Dichloroethene	4.9		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	4.6		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.1		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
UA-02 (18-09-1373-10)						
1,1-Dichloroethene	0.84	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	6.3		1.0	ug/L	EPA 8260B	EPA 5030C
S-07 (18-09-1373-11)						
Trichloroethene	0.36	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UB-03 (18-09-1373-12)						
c-1,2-Dichloroethene	5.6		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	9.6		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	2.2		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
UA-6D (18-09-1373-13)						
Tetrachloroethene	3.3		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.67	J	0.33*	ug/L	EPA 8260B	EPA 5030C
UA-6 (18-09-1373-14)						
1,1-Dichloroethene	0.41	J	0.34*	ug/L	EPA 8260B	EPA 5030C
c-1,2-Dichloroethene	0.46	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	3.1		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	6.7		1.0	ug/L	EPA 8260B	EPA 5030C
AB-1 (18-09-1373-16)						
Acetone	20		20	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1373
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/19/18

Attn: Ken Puentes

Page 2 of 2

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
S-26 (18-09-1373-17)						
Acetone	12	J	10*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.37	J	0.33*	ug/L	EPA 8260B	EPA 5030C
S-31 (18-09-1373-18)						
Acetone	14	J	10*	ug/L	EPA 8260B	EPA 5030C
S-27 (18-09-1373-19)						
Acetone	16	J	10*	ug/L	EPA 8260B	EPA 5030C
SE-1 (18-09-1373-20)						
Tetrachloroethene	170		50	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	6900		50	ug/L	EPA 8260B	EPA 5030C
S-8 (18-09-1373-21)						
Tetrachloroethene	60		20	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2400		20	ug/L	EPA 8260B	EPA 5030C
S-800 (18-09-1373-22)						
Tetrachloroethene	48		20	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2000		20	ug/L	EPA 8260B	EPA 5030C
HEW-3 (18-09-1373-23)						
1,1-Dichloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	110		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	18-09-1373-4-D	09/19/18 09:08	Aqueous	GC/MS DDD	09/20/18	09/20/18 20:46	180920L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	68	56-123	
1,4-Dioxane-d8(IDS-IS)	45	30-120	

RB-091918B	18-09-1373-5-D	09/19/18 09:22	Aqueous	GC/MS DDD	09/20/18	09/20/18 21:02	180920L02A
------------	----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	74	56-123	
1,4-Dioxane-d8(IDS-IS)	44	30-120	

UAX-02	18-09-1373-8-D	09/19/18 10:02	Aqueous	GC/MS DDD	09/20/18	09/20/18 21:18	180920L02A
--------	----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.3	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	67	56-123	
1,4-Dioxane-d8(IDS-IS)	41	30-120	

UAX-0200	18-09-1373-9-D	09/19/18 10:04	Aqueous	GC/MS DDD	09/20/18	09/20/18 21:33	180920L02A
----------	----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.1	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	67	56-123	
1,4-Dioxane-d8(IDS-IS)	46	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-091918A	18-09-1373-15-D	09/19/18 08:45	Aqueous	GC/MS DDD	09/20/18	09/20/18 21:49	180920L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	78	56-123	
1,4-Dioxane-d8(IDS-IS)	46	30-120	

HEW-3	18-09-1373-23-D	09/19/18 10:40	Aqueous	GC/MS DDD	09/20/18	09/20/18 22:05	180920L02A
-------	-----------------	----------------	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	74	56-123	
1,4-Dioxane-d8(IDS-IS)	46	30-120	

Method Blank	099-16-216-1494	N/A	Aqueous	GC/MS DDD	09/20/18	09/20/18 13:58	180920L02A
--------------	-----------------	-----	---------	-----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	75	56-123	
1,4-Dioxane-d8(IDS-IS)	34	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-091918	18-09-1373-1-A	09/19/18 08:00	Aqueous	GC/MS FFF	09/25/18	09/25/18 14:28	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	108	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-01	18-09-1373-2-C	09/19/18 08:28	Aqueous	GC/MS FFF	09/27/18	09/27/18 15:03	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 4 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	101	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 5 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-04	18-09-1373-3-A	09/19/18 08:37	Aqueous	GC/MS FFF	09/25/18	09/25/18 15:01	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 6 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.54	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	36	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	108	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 7 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	18-09-1373-4-B	09/19/18 09:08	Aqueous	GC/MS FFF	09/27/18	09/27/18 20:40	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 8 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.51	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	108	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 9 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-091918B	18-09-1373-5-A	09/19/18 09:22	Aqueous	GC/MS FFF	09/25/18	09/25/18 16:42	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 10 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	111	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 11 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-03	18-09-1373-6-C	09/19/18 09:34	Aqueous	GC/MS FFF	09/27/18	09/27/18 15:37	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 12 of 52

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.44	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 13 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-14	18-09-1373-7-A	09/19/18 09:47	Aqueous	GC/MS FFF	09/25/18	09/25/18 17:16	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 14 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	1.0	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	110	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 15 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-02	18-09-1373-8-A	09/19/18 10:02	Aqueous	GC/MS FFF	09/25/18	09/25/18 17:49	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	5.0	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 16 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	4.5	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	110	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 17 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-0200	18-09-1373-9-A	09/19/18 10:04	Aqueous	GC/MS FFF	09/25/18	09/25/18 18:23	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	4.9	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 18 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	4.6	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	110	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 19 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-02	18-09-1373-10-A	09/19/18 10:30	Aqueous	GC/MS FFF	09/25/18	09/25/18 18:57	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.84	1.0	0.34	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 20 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	6.3	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	111	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 21 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-07	18-09-1373-11-A	09/19/18 10:41	Aqueous	GC/MS FFF	09/25/18	09/25/18 19:30	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 22 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.36	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	112	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 23 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-03	18-09-1373-12-C	09/19/18 11:00	Aqueous	GC/MS FFF	09/27/18	09/27/18 16:11	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	5.6	1.0	0.34	1.00	
t-1,2-Dichloroethene	9.6	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 24 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	2.2	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	2.1	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 25 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-6D	18-09-1373-13-C	09/19/18 08:20	Aqueous	GC/MS FFF	09/27/18	09/27/18 17:18	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 26 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	3.3	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.67	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	107	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 27 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-6	18-09-1373-14-C	09/19/18 08:30	Aqueous	GC/MS FFF	09/27/18	09/27/18 17:52	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.41	1.0	0.34	1.00	J
c-1,2-Dichloroethene	0.46	1.0	0.34	1.00	J
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 28 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	3.1	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	6.7	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 29 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-091918A	18-09-1373-15-A	09/19/18 08:45	Aqueous	GC/MS FFF	09/25/18	09/25/18 20:04	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 30 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	111	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 31 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-1	18-09-1373-16-C	09/19/18 09:00	Aqueous	GC/MS FFF	09/27/18	09/27/18 18:25	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	20	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 32 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	107	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 33 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-26	18-09-1373-17-C	09/19/18 09:10	Aqueous	GC/MS FFF	09/27/18	09/27/18 18:59	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	12	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 34 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	0.37	1.0	0.33	1.00	J
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	107	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 35 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-31	18-09-1373-18-C	09/19/18 09:30	Aqueous	GC/MS FFF	09/27/18	09/27/18 19:33	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	14	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 36 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	107	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 37 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-27	18-09-1373-19-C	09/19/18 09:50	Aqueous	GC/MS FFF	09/27/18	09/27/18 20:06	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	16	20	10	1.00	J
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 38 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	108	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 39 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SE-1	18-09-1373-20-A	09/19/18 10:05	Aqueous	GC/MS FFF	09/25/18	09/25/18 15:35	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	1000	500	50.0	
Benzene	ND	50	15	50.0	
Bromobenzene	ND	50	16	50.0	
Bromochloromethane	ND	100	30	50.0	
Bromodichloromethane	ND	50	17	50.0	
Bromoform	ND	250	86	50.0	
Bromomethane	ND	2500	920	50.0	
2-Butanone	ND	1000	350	50.0	
n-Butylbenzene	ND	50	15	50.0	
sec-Butylbenzene	ND	50	14	50.0	
tert-Butylbenzene	ND	50	18	50.0	
Carbon Disulfide	ND	500	34	50.0	
Carbon Tetrachloride	ND	100	52	50.0	
Chlorobenzene	ND	50	15	50.0	
Chloroethane	ND	250	37	50.0	
Chloroform	ND	50	17	50.0	
Chloromethane	ND	500	30	50.0	
2-Chlorotoluene	ND	50	15	50.0	
4-Chlorotoluene	ND	50	14	50.0	
Dibromochloromethane	ND	100	26	50.0	
1,2-Dibromo-3-Chloropropane	ND	250	100	50.0	
1,2-Dibromoethane	ND	50	20	50.0	
Dibromomethane	ND	50	22	50.0	
1,2-Dichlorobenzene	ND	50	14	50.0	
1,3-Dichlorobenzene	ND	50	14	50.0	
1,4-Dichlorobenzene	ND	50	16	50.0	
Dichlorodifluoromethane	ND	250	74	50.0	
1,1-Dichloroethane	ND	50	21	50.0	
1,2-Dichloroethane	ND	50	16	50.0	
1,1-Dichloroethene	ND	50	17	50.0	
c-1,2-Dichloroethene	ND	50	17	50.0	
t-1,2-Dichloroethene	ND	50	23	50.0	
1,2-Dichloropropane	ND	50	17	50.0	
1,3-Dichloropropane	ND	50	14	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 40 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	50	21	50.0	
1,1-Dichloropropene	ND	50	15	50.0	
c-1,3-Dichloropropene	ND	25	14	50.0	
t-1,3-Dichloropropene	ND	25	12	50.0	
Ethylbenzene	ND	50	13	50.0	
2-Hexanone	ND	500	250	50.0	
Isopropylbenzene	ND	50	14	50.0	
p-Isopropyltoluene	ND	50	15	50.0	
Methylene Chloride	ND	500	200	50.0	
4-Methyl-2-Pentanone	ND	500	23	50.0	
Naphthalene	ND	500	250	50.0	
n-Propylbenzene	ND	50	13	50.0	
Styrene	ND	50	12	50.0	
1,1,1,2-Tetrachloroethane	ND	100	25	50.0	
1,1,2,2-Tetrachloroethane	ND	500	16	50.0	
Tetrachloroethene	170	50	17	50.0	
Toluene	ND	50	14	50.0	
1,2,3-Trichlorobenzene	ND	50	15	50.0	
1,2,4-Trichlorobenzene	ND	50	17	50.0	
1,1,1-Trichloroethane	ND	50	19	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	33	50.0	
1,1,2-Trichloroethane	ND	50	16	50.0	
Trichloroethene	6900	50	16	50.0	
Trichlorofluoromethane	ND	500	88	50.0	
1,2,3-Trichloropropane	ND	250	15	50.0	
1,2,4-Trimethylbenzene	ND	50	15	50.0	
1,3,5-Trimethylbenzene	ND	50	14	50.0	
Vinyl Acetate	ND	500	130	50.0	
Vinyl Chloride	ND	250	71	50.0	
p/m-Xylene	ND	100	28	50.0	
o-Xylene	ND	50	13	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	50	15	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	109	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 41 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-8	18-09-1373-21-B	09/19/18 10:15	Aqueous	GC/MS FFF	09/26/18	09/26/18 12:58	180926L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	400	200	20.0	
Benzene	ND	20	6.0	20.0	
Bromobenzene	ND	20	6.4	20.0	
Bromochloromethane	ND	40	12	20.0	
Bromodichloromethane	ND	20	6.7	20.0	
Bromoform	ND	100	34	20.0	
Bromomethane	ND	1000	370	20.0	
2-Butanone	ND	400	140	20.0	
n-Butylbenzene	ND	20	6.1	20.0	
sec-Butylbenzene	ND	20	5.5	20.0	
tert-Butylbenzene	ND	20	7.1	20.0	
Carbon Disulfide	ND	200	14	20.0	
Carbon Tetrachloride	ND	40	21	20.0	
Chlorobenzene	ND	20	6.0	20.0	
Chloroethane	ND	100	15	20.0	
Chloroform	ND	20	6.8	20.0	
Chloromethane	ND	200	12	20.0	
2-Chlorotoluene	ND	20	5.9	20.0	
4-Chlorotoluene	ND	20	5.5	20.0	
Dibromochloromethane	ND	40	11	20.0	
1,2-Dibromo-3-Chloropropane	ND	100	41	20.0	
1,2-Dibromoethane	ND	20	7.9	20.0	
Dibromomethane	ND	20	8.9	20.0	
1,2-Dichlorobenzene	ND	20	5.7	20.0	
1,3-Dichlorobenzene	ND	20	5.8	20.0	
1,4-Dichlorobenzene	ND	20	6.4	20.0	
Dichlorodifluoromethane	ND	100	30	20.0	
1,1-Dichloroethane	ND	20	8.4	20.0	
1,2-Dichloroethane	ND	20	6.4	20.0	
1,1-Dichloroethene	ND	20	6.9	20.0	
c-1,2-Dichloroethene	ND	20	6.9	20.0	
t-1,2-Dichloroethene	ND	20	9.4	20.0	
1,2-Dichloropropane	ND	20	6.9	20.0	
1,3-Dichloropropane	ND	20	5.7	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 42 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	20	8.3	20.0	
1,1-Dichloropropene	ND	20	5.9	20.0	
c-1,3-Dichloropropene	ND	10	5.7	20.0	
t-1,3-Dichloropropene	ND	10	4.6	20.0	
Ethylbenzene	ND	20	5.3	20.0	
2-Hexanone	ND	200	99	20.0	
Isopropylbenzene	ND	20	5.4	20.0	
p-Isopropyltoluene	ND	20	6.1	20.0	
Methylene Chloride	ND	200	80	20.0	
4-Methyl-2-Pentanone	ND	200	9.2	20.0	
Naphthalene	ND	200	100	20.0	
n-Propylbenzene	ND	20	5.2	20.0	
Styrene	ND	20	4.8	20.0	
1,1,1,2-Tetrachloroethane	ND	40	10	20.0	
1,1,2,2-Tetrachloroethane	ND	200	6.4	20.0	
Tetrachloroethene	60	20	6.6	20.0	
Toluene	ND	20	5.8	20.0	
1,2,3-Trichlorobenzene	ND	20	6.1	20.0	
1,2,4-Trichlorobenzene	ND	20	6.8	20.0	
1,1,1-Trichloroethane	ND	20	7.7	20.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	200	13	20.0	
1,1,2-Trichloroethane	ND	20	6.2	20.0	
Trichloroethene	2400	20	6.6	20.0	
Trichlorofluoromethane	ND	200	35	20.0	
1,2,3-Trichloropropane	ND	100	6.0	20.0	
1,2,4-Trimethylbenzene	ND	20	5.9	20.0	
1,3,5-Trimethylbenzene	ND	20	5.6	20.0	
Vinyl Acetate	ND	200	53	20.0	
Vinyl Chloride	ND	100	28	20.0	
p/m-Xylene	ND	40	11	20.0	
o-Xylene	ND	20	5.3	20.0	
Methyl-t-Butyl Ether (MTBE)	ND	20	6.0	20.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	111	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 43 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-800	18-09-1373-22-B	09/19/18 10:20	Aqueous	GC/MS FFF	09/26/18	09/26/18 13:32	180926L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	400	200	20.0	
Benzene	ND	20	6.0	20.0	
Bromobenzene	ND	20	6.4	20.0	
Bromochloromethane	ND	40	12	20.0	
Bromodichloromethane	ND	20	6.7	20.0	
Bromoform	ND	100	34	20.0	
Bromomethane	ND	1000	370	20.0	
2-Butanone	ND	400	140	20.0	
n-Butylbenzene	ND	20	6.1	20.0	
sec-Butylbenzene	ND	20	5.5	20.0	
tert-Butylbenzene	ND	20	7.1	20.0	
Carbon Disulfide	ND	200	14	20.0	
Carbon Tetrachloride	ND	40	21	20.0	
Chlorobenzene	ND	20	6.0	20.0	
Chloroethane	ND	100	15	20.0	
Chloroform	ND	20	6.8	20.0	
Chloromethane	ND	200	12	20.0	
2-Chlorotoluene	ND	20	5.9	20.0	
4-Chlorotoluene	ND	20	5.5	20.0	
Dibromochloromethane	ND	40	11	20.0	
1,2-Dibromo-3-Chloropropane	ND	100	41	20.0	
1,2-Dibromoethane	ND	20	7.9	20.0	
Dibromomethane	ND	20	8.9	20.0	
1,2-Dichlorobenzene	ND	20	5.7	20.0	
1,3-Dichlorobenzene	ND	20	5.8	20.0	
1,4-Dichlorobenzene	ND	20	6.4	20.0	
Dichlorodifluoromethane	ND	100	30	20.0	
1,1-Dichloroethane	ND	20	8.4	20.0	
1,2-Dichloroethane	ND	20	6.4	20.0	
1,1-Dichloroethene	ND	20	6.9	20.0	
c-1,2-Dichloroethene	ND	20	6.9	20.0	
t-1,2-Dichloroethene	ND	20	9.4	20.0	
1,2-Dichloropropane	ND	20	6.9	20.0	
1,3-Dichloropropane	ND	20	5.7	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 44 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	20	8.3	20.0	
1,1-Dichloropropene	ND	20	5.9	20.0	
c-1,3-Dichloropropene	ND	10	5.7	20.0	
t-1,3-Dichloropropene	ND	10	4.6	20.0	
Ethylbenzene	ND	20	5.3	20.0	
2-Hexanone	ND	200	99	20.0	
Isopropylbenzene	ND	20	5.4	20.0	
p-Isopropyltoluene	ND	20	6.1	20.0	
Methylene Chloride	ND	200	80	20.0	
4-Methyl-2-Pentanone	ND	200	9.2	20.0	
Naphthalene	ND	200	100	20.0	
n-Propylbenzene	ND	20	5.2	20.0	
Styrene	ND	20	4.8	20.0	
1,1,1,2-Tetrachloroethane	ND	40	10	20.0	
1,1,2,2-Tetrachloroethane	ND	200	6.4	20.0	
Tetrachloroethene	48	20	6.6	20.0	
Toluene	ND	20	5.8	20.0	
1,2,3-Trichlorobenzene	ND	20	6.1	20.0	
1,2,4-Trichlorobenzene	ND	20	6.8	20.0	
1,1,1-Trichloroethane	ND	20	7.7	20.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	200	13	20.0	
1,1,2-Trichloroethane	ND	20	6.2	20.0	
Trichloroethene	2000	20	6.6	20.0	
Trichlorofluoromethane	ND	200	35	20.0	
1,2,3-Trichloropropane	ND	100	6.0	20.0	
1,2,4-Trimethylbenzene	ND	20	5.9	20.0	
1,3,5-Trimethylbenzene	ND	20	5.6	20.0	
Vinyl Acetate	ND	200	53	20.0	
Vinyl Chloride	ND	100	28	20.0	
p/m-Xylene	ND	40	11	20.0	
o-Xylene	ND	20	5.3	20.0	
Methyl-t-Butyl Ether (MTBE)	ND	20	6.0	20.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	111	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 45 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-3	18-09-1373-23-C	09/19/18 10:40	Aqueous	GC/MS FFF	09/27/18	09/27/18 21:13	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	2.1	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 46 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	1.7	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	110	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	109	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 47 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26983	N/A	Aqueous	GC/MS FFF	09/25/18	09/25/18 12:37	180925L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 48 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	109	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 49 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26991	N/A	Aqueous	GC/MS FFF	09/26/18	09/26/18 12:11	180926L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 50 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	112	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 51 of 52

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26996	N/A	Aqueous	GC/MS FFF	09/27/18	09/27/18 13:14	180927L003

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 52 of 52

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	100	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 3510C
Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
18-09-1320-1	Sample	Aqueous	GC/MS DDD	09/20/18	09/20/18 17:06	180920S02
18-09-1320-1	Matrix Spike	Aqueous	GC/MS DDD	09/20/18	09/20/18 14:29	180920S02
18-09-1320-1	Matrix Spike Duplicate	Aqueous	GC/MS DDD	09/20/18	09/20/18 14:45	180920S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	538.8	20.00	626.4	438	457.4	0	50-130	31	0-20	3,4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/19/18
 Work Order: 18-09-1373
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-216-1494	LCS	Aqueous	GC/MS DDD	09/20/18	09/20/18 14:14	180920L02A

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
1,4-Dioxane	20.00	16.07	80	50-130	



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 7

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-001-26983	LCS	Aqueous		GC/MS FFF	09/25/18	09/25/18 09:48	180925L005			
099-14-001-26983	LCSD	Aqueous		GC/MS FFF	09/25/18	09/25/18 10:22	180925L005			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	43.58	87	40.33	81	53-137	39-151	8	0-21	
Benzene	50.00	50.78	102	52.71	105	79-121	72-128	4	0-20	
Bromobenzene	50.00	50.33	101	51.88	104	80-120	73-127	3	0-20	
Bromochloromethane	50.00	50.84	102	51.22	102	80-122	73-129	1	0-20	
Bromodichloromethane	50.00	51.92	104	53.10	106	80-124	73-131	2	0-20	
Bromoform	50.00	51.09	102	51.81	104	73-127	64-136	1	0-20	
Bromomethane	50.00	28.68	57	30.51	61	50-150	33-167	6	0-26	
2-Butanone	50.00	54.18	108	54.54	109	60-126	49-137	1	0-20	
n-Butylbenzene	50.00	54.45	109	56.19	112	72-138	61-149	3	0-20	
sec-Butylbenzene	50.00	53.27	107	55.03	110	77-131	68-140	3	0-20	
tert-Butylbenzene	50.00	51.84	104	53.48	107	80-125	72-132	3	0-20	
Carbon Disulfide	50.00	54.47	109	57.33	115	50-150	33-167	5	0-22	
Carbon Tetrachloride	50.00	59.31	119	61.66	123	65-143	52-156	4	0-20	
Chlorobenzene	50.00	49.90	100	51.93	104	80-120	73-127	4	0-20	
Chloroethane	50.00	46.16	92	48.59	97	62-128	51-139	5	0-20	
Chloroform	50.00	53.90	108	55.54	111	80-120	73-127	3	0-20	
Chloromethane	50.00	33.44	67	34.28	69	43-133	28-148	2	0-20	
2-Chlorotoluene	50.00	53.00	106	54.85	110	80-121	73-128	3	0-20	
4-Chlorotoluene	50.00	55.35	111	57.36	115	80-120	73-127	4	0-20	
Dibromochloromethane	50.00	51.85	104	53.22	106	80-123	73-130	3	0-20	
1,2-Dibromo-3-Chloropropane	50.00	51.66	103	53.41	107	66-126	56-136	3	0-20	
1,2-Dibromoethane	50.00	51.57	103	51.54	103	80-120	73-127	0	0-20	
Dibromomethane	50.00	52.74	105	53.74	107	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	50.00	51.87	104	53.14	106	80-120	73-127	2	0-20	
1,3-Dichlorobenzene	50.00	51.95	104	53.23	106	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	50.00	50.81	102	52.50	105	80-120	73-127	3	0-20	
Dichlorodifluoromethane	50.00	54.23	108	57.22	114	50-150	33-167	5	0-30	
1,1-Dichloroethane	50.00	47.69	95	49.63	99	72-126	63-135	4	0-20	
1,2-Dichloroethane	50.00	50.84	102	52.19	104	76-120	69-127	3	0-20	
1,1-Dichloroethene	50.00	50.72	101	36.59	73	66-132	55-143	32	0-20	X
c-1,2-Dichloroethene	50.00	55.16	110	56.79	114	78-120	71-127	3	0-20	
t-1,2-Dichloroethene	50.00	54.96	110	57.30	115	66-132	55-143	4	0-20	
1,2-Dichloropropane	50.00	50.21	100	51.54	103	80-120	73-127	3	0-20	
1,3-Dichloropropane	50.00	51.54	103	52.64	105	80-120	73-127	2	0-20	
2,2-Dichloropropane	50.00	57.58	115	58.71	117	50-150	33-167	2	0-20	
1,1-Dichloropropene	50.00	55.62	111	57.83	116	75-123	67-131	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 7

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	48.15	96	49.40	99	77-131	68-140	3	0-20	
t-1,3-Dichloropropene	50.00	48.09	96	49.08	98	76-136	66-146	2	0-20	
Ethylbenzene	50.00	53.12	106	55.18	110	80-120	73-127	4	0-20	
2-Hexanone	50.00	48.12	96	50.85	102	63-123	53-133	6	0-20	
Isopropylbenzene	50.00	52.64	105	54.97	110	80-128	72-136	4	0-20	
p-Isopropyltoluene	50.00	52.91	106	54.63	109	73-133	63-143	3	0-20	
Methylene Chloride	50.00	52.07	104	53.64	107	61-133	49-145	3	0-27	
4-Methyl-2-Pentanone	50.00	47.70	95	48.76	98	65-125	55-135	2	0-20	
Naphthalene	50.00	47.18	94	47.76	96	69-129	59-139	1	0-20	
n-Propylbenzene	50.00	53.67	107	55.94	112	80-128	72-136	4	0-20	
Styrene	50.00	53.33	107	54.64	109	80-126	72-134	2	0-20	
1,1,1,2-Tetrachloroethane	50.00	50.80	102	52.42	105	80-129	72-137	3	0-20	
1,1,2,2-Tetrachloroethane	50.00	51.11	102	51.86	104	74-122	66-130	1	0-20	
Tetrachloroethene	50.00	50.76	102	55.31	111	55-139	41-153	9	0-23	
Toluene	50.00	52.07	104	53.90	108	80-120	73-127	3	0-20	
1,2,3-Trichlorobenzene	50.00	50.33	101	50.97	102	72-132	62-142	1	0-20	
1,2,4-Trichlorobenzene	50.00	50.65	101	51.52	103	74-134	64-144	2	0-20	
1,1,1-Trichloroethane	50.00	54.21	108	56.38	113	76-124	68-132	4	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	49.93	100	41.24	82	54-150	38-166	19	0-30	
1,1,2-Trichloroethane	50.00	50.73	101	51.56	103	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.72	101	52.34	105	79-121	72-128	3	0-20	
Trichlorofluoromethane	50.00	48.94	98	50.30	101	72-132	62-142	3	0-20	
1,2,3-Trichloropropane	50.00	50.14	100	50.93	102	75-123	67-131	2	0-20	
1,2,4-Trimethylbenzene	50.00	55.58	111	57.82	116	74-128	65-137	4	0-20	
1,3,5-Trimethylbenzene	50.00	53.67	107	55.43	111	77-131	68-140	3	0-20	
Vinyl Acetate	50.00	49.93	100	50.06	100	50-150	33-167	0	0-20	
Vinyl Chloride	50.00	53.01	106	55.70	111	63-129	52-140	5	0-20	
p/m-Xylene	100.0	109.9	110	114.6	115	80-122	73-129	4	0-20	
o-Xylene	50.00	55.10	110	57.17	114	80-128	72-136	4	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	48.76	98	49.37	99	69-123	60-132	1	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 5030C
Method: EPA 8260B

Page 4 of 7

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-001-26991	LCS	Aqueous		GC/MS FFF	09/26/18	09/26/18 09:44	180926L003			
099-14-001-26991	LCSD	Aqueous		GC/MS FFF	09/26/18	09/26/18 10:18	180926L003			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	47.48	95	41.86	84	53-137	39-151	13	0-21	
Benzene	50.00	51.11	102	53.08	106	79-121	72-128	4	0-20	
Bromobenzene	50.00	50.75	101	52.05	104	80-120	73-127	3	0-20	
Bromochloromethane	50.00	51.07	102	52.22	104	80-122	73-129	2	0-20	
Bromodichloromethane	50.00	52.56	105	54.33	109	80-124	73-131	3	0-20	
Bromoform	50.00	50.70	101	52.13	104	73-127	64-136	3	0-20	
Bromomethane	50.00	30.38	61	31.47	63	50-150	33-167	4	0-26	
2-Butanone	50.00	53.83	108	55.56	111	60-126	49-137	3	0-20	
n-Butylbenzene	50.00	51.81	104	55.96	112	72-138	61-149	8	0-20	
sec-Butylbenzene	50.00	51.72	103	54.73	109	77-131	68-140	6	0-20	
tert-Butylbenzene	50.00	50.79	102	51.88	104	80-125	72-132	2	0-20	
Carbon Disulfide	50.00	50.71	101	54.37	109	50-150	33-167	7	0-22	
Carbon Tetrachloride	50.00	58.79	118	61.25	122	65-143	52-156	4	0-20	
Chlorobenzene	50.00	50.68	101	52.01	104	80-120	73-127	3	0-20	
Chloroethane	50.00	44.58	89	44.76	90	62-128	51-139	0	0-20	
Chloroform	50.00	54.25	109	55.74	111	80-120	73-127	3	0-20	
Chloromethane	50.00	34.87	70	34.95	70	43-133	28-148	0	0-20	
2-Chlorotoluene	50.00	53.01	106	54.72	109	80-121	73-128	3	0-20	
4-Chlorotoluene	50.00	54.76	110	57.32	115	80-120	73-127	5	0-20	
Dibromochloromethane	50.00	52.64	105	53.84	108	80-123	73-130	2	0-20	
1,2-Dibromo-3-Chloropropane	50.00	51.07	102	52.39	105	66-126	56-136	3	0-20	
1,2-Dibromoethane	50.00	51.15	102	51.85	104	80-120	73-127	1	0-20	
Dibromomethane	50.00	53.13	106	54.03	108	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	50.00	50.37	101	53.72	107	80-120	73-127	6	0-20	
1,3-Dichlorobenzene	50.00	51.29	103	53.23	106	80-120	73-127	4	0-20	
1,4-Dichlorobenzene	50.00	50.29	101	52.38	105	80-120	73-127	4	0-20	
Dichlorodifluoromethane	50.00	48.71	97	52.14	104	50-150	33-167	7	0-30	
1,1-Dichloroethane	50.00	46.83	94	48.85	98	72-126	63-135	4	0-20	
1,2-Dichloroethane	50.00	51.85	104	52.58	105	76-120	69-127	1	0-20	
1,1-Dichloroethene	50.00	49.09	98	43.82	88	66-132	55-143	11	0-20	
c-1,2-Dichloroethene	50.00	54.49	109	56.63	113	78-120	71-127	4	0-20	
t-1,2-Dichloroethene	50.00	53.17	106	56.03	112	66-132	55-143	5	0-20	
1,2-Dichloropropane	50.00	49.93	100	51.50	103	80-120	73-127	3	0-20	
1,3-Dichloropropane	50.00	52.34	105	53.03	106	80-120	73-127	1	0-20	
2,2-Dichloropropane	50.00	55.94	112	56.92	114	50-150	33-167	2	0-20	
1,1-Dichloropropene	50.00	54.19	108	56.50	113	75-123	67-131	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 5 of 7

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	47.69	95	48.90	98	77-131	68-140	3	0-20	
t-1,3-Dichloropropene	50.00	48.04	96	49.23	98	76-136	66-146	2	0-20	
Ethylbenzene	50.00	53.03	106	55.27	111	80-120	73-127	4	0-20	
2-Hexanone	50.00	49.05	98	49.98	100	63-123	53-133	2	0-20	
Isopropylbenzene	50.00	52.22	104	54.49	109	80-128	72-136	4	0-20	
p-Isopropyltoluene	50.00	51.28	103	54.02	108	73-133	63-143	5	0-20	
Methylene Chloride	50.00	51.03	102	53.12	106	61-133	49-145	4	0-27	
4-Methyl-2-Pentanone	50.00	46.63	93	48.17	96	65-125	55-135	3	0-20	
Naphthalene	50.00	45.05	90	46.80	94	69-129	59-139	4	0-20	
n-Propylbenzene	50.00	53.59	107	56.15	112	80-128	72-136	5	0-20	
Styrene	50.00	53.47	107	55.05	110	80-126	72-134	3	0-20	
1,1,1,2-Tetrachloroethane	50.00	51.37	103	53.09	106	80-129	72-137	3	0-20	
1,1,2,2-Tetrachloroethane	50.00	51.77	104	51.33	103	74-122	66-130	1	0-20	
Tetrachloroethene	50.00	48.86	98	61.42	123	55-139	41-153	23	0-23	
Toluene	50.00	52.23	104	53.73	107	80-120	73-127	3	0-20	
1,2,3-Trichlorobenzene	50.00	48.41	97	51.30	103	72-132	62-142	6	0-20	
1,2,4-Trichlorobenzene	50.00	48.43	97	51.37	103	74-134	64-144	6	0-20	
1,1,1-Trichloroethane	50.00	53.70	107	55.95	112	76-124	68-132	4	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	51.32	103	44.81	90	54-150	38-166	14	0-30	
1,1,2-Trichloroethane	50.00	51.42	103	51.60	103	80-120	73-127	0	0-20	
Trichloroethene	50.00	50.47	101	52.82	106	79-121	72-128	5	0-20	
Trichlorofluoromethane	50.00	43.36	87	49.74	99	72-132	62-142	14	0-20	
1,2,3-Trichloropropane	50.00	51.08	102	51.75	103	75-123	67-131	1	0-20	
1,2,4-Trimethylbenzene	50.00	54.10	108	57.36	115	74-128	65-137	6	0-20	
1,3,5-Trimethylbenzene	50.00	53.28	107	55.46	111	77-131	68-140	4	0-20	
Vinyl Acetate	50.00	48.62	97	46.51	93	50-150	33-167	4	0-20	
Vinyl Chloride	50.00	51.07	102	54.37	109	63-129	52-140	6	0-20	
p/m-Xylene	100.0	109.9	110	114.4	114	80-122	73-129	4	0-20	
o-Xylene	50.00	54.79	110	57.06	114	80-128	72-136	4	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	46.80	94	47.53	95	69-123	60-132	2	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 5030C
Method: EPA 8260B

Page 6 of 7

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-001-26996	LCS	Aqueous		GC/MS FFF	09/27/18	09/27/18 10:29	180927L003			
099-14-001-26996	LCSD	Aqueous		GC/MS FFF	09/27/18	09/27/18 11:03	180927L003			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	25.63	51	30.99	62	53-137	39-151	19	0-21	ME
Benzene	50.00	48.18	96	50.93	102	79-121	72-128	6	0-20	
Bromobenzene	50.00	50.14	100	52.19	104	80-120	73-127	4	0-20	
Bromochloromethane	50.00	46.85	94	47.77	96	80-122	73-129	2	0-20	
Bromodichloromethane	50.00	52.16	104	54.26	109	80-124	73-131	4	0-20	
Bromoform	50.00	55.12	110	53.70	107	73-127	64-136	3	0-20	
Bromomethane	50.00	27.48	55	30.40	61	50-150	33-167	10	0-26	
2-Butanone	50.00	54.79	110	52.36	105	60-126	49-137	5	0-20	
n-Butylbenzene	50.00	50.07	100	52.65	105	72-138	61-149	5	0-20	
sec-Butylbenzene	50.00	48.13	96	51.06	102	77-131	68-140	6	0-20	
tert-Butylbenzene	50.00	49.74	99	51.16	102	80-125	72-132	3	0-20	
Carbon Disulfide	50.00	43.92	88	49.82	100	50-150	33-167	13	0-22	
Carbon Tetrachloride	50.00	54.01	108	56.81	114	65-143	52-156	5	0-20	
Chlorobenzene	50.00	50.03	100	52.13	104	80-120	73-127	4	0-20	
Chloroethane	50.00	40.63	81	43.70	87	62-128	51-139	7	0-20	
Chloroform	50.00	48.94	98	50.26	101	80-120	73-127	3	0-20	
Chloromethane	50.00	32.72	65	31.42	63	43-133	28-148	4	0-20	
2-Chlorotoluene	50.00	51.40	103	53.97	108	80-121	73-128	5	0-20	
4-Chlorotoluene	50.00	51.89	104	54.06	108	80-120	73-127	4	0-20	
Dibromochloromethane	50.00	55.29	111	56.14	112	80-123	73-130	2	0-20	
1,2-Dibromo-3-Chloropropane	50.00	50.71	101	48.69	97	66-126	56-136	4	0-20	
1,2-Dibromoethane	50.00	51.35	103	51.73	103	80-120	73-127	1	0-20	
Dibromomethane	50.00	51.68	103	52.50	105	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	50.00	50.17	100	50.60	101	80-120	73-127	1	0-20	
1,3-Dichlorobenzene	50.00	49.88	100	51.21	102	80-120	73-127	3	0-20	
1,4-Dichlorobenzene	50.00	48.79	98	50.34	101	80-120	73-127	3	0-20	
Dichlorodifluoromethane	50.00	41.43	83	45.33	91	50-150	33-167	9	0-30	
1,1-Dichloroethane	50.00	43.32	87	45.41	91	72-126	63-135	5	0-20	
1,2-Dichloroethane	50.00	51.62	103	52.52	105	76-120	69-127	2	0-20	
1,1-Dichloroethene	50.00	33.46	67	44.39	89	66-132	55-143	28	0-20	X
c-1,2-Dichloroethene	50.00	50.01	100	51.42	103	78-120	71-127	3	0-20	
t-1,2-Dichloroethene	50.00	48.19	96	51.04	102	66-132	55-143	6	0-20	
1,2-Dichloropropane	50.00	50.36	101	52.06	104	80-120	73-127	3	0-20	
1,3-Dichloropropane	50.00	51.14	102	51.78	104	80-120	73-127	1	0-20	
2,2-Dichloropropane	50.00	47.67	95	48.92	98	50-150	33-167	3	0-20	
1,1-Dichloropropene	50.00	48.96	98	51.67	103	75-123	67-131	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/19/18
Work Order: 18-09-1373
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 7 of 7

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	46.76	94	47.93	96	77-131	68-140	2	0-20	
t-1,3-Dichloropropene	50.00	47.36	95	47.75	95	76-136	66-146	1	0-20	
Ethylbenzene	50.00	51.73	103	54.88	110	80-120	73-127	6	0-20	
2-Hexanone	50.00	54.76	110	54.12	108	63-123	53-133	1	0-20	
Isopropylbenzene	50.00	50.48	101	53.89	108	80-128	72-136	7	0-20	
p-Isopropyltoluene	50.00	50.62	101	53.18	106	73-133	63-143	5	0-20	
Methylene Chloride	50.00	46.68	93	48.31	97	61-133	49-145	3	0-27	
4-Methyl-2-Pentanone	50.00	50.32	101	50.49	101	65-125	55-135	0	0-20	
Naphthalene	50.00	46.94	94	46.84	94	69-129	59-139	0	0-20	
n-Propylbenzene	50.00	51.85	104	55.12	110	80-128	72-136	6	0-20	
Styrene	50.00	51.65	103	54.20	108	80-126	72-134	5	0-20	
1,1,1,2-Tetrachloroethane	50.00	52.47	105	54.16	108	80-129	72-137	3	0-20	
1,1,2,2-Tetrachloroethane	50.00	50.25	100	48.88	98	74-122	66-130	3	0-20	
Tetrachloroethene	50.00	45.14	90	55.47	111	55-139	41-153	21	0-23	
Toluene	50.00	50.37	101	52.79	106	80-120	73-127	5	0-20	
1,2,3-Trichlorobenzene	50.00	48.76	98	49.06	98	72-132	62-142	1	0-20	
1,2,4-Trichlorobenzene	50.00	49.16	98	49.53	99	74-134	64-144	1	0-20	
1,1,1-Trichloroethane	50.00	48.60	97	51.02	102	76-124	68-132	5	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	26.59	53	38.27	77	54-150	38-166	36	0-30	ME,X
1,1,2-Trichloroethane	50.00	50.66	101	50.70	101	80-120	73-127	0	0-20	
Trichloroethene	50.00	49.32	99	52.60	105	79-121	72-128	6	0-20	
Trichlorofluoromethane	50.00	38.81	78	41.63	83	72-132	62-142	7	0-20	
1,2,3-Trichloropropane	50.00	50.57	101	50.22	100	75-123	67-131	1	0-20	
1,2,4-Trimethylbenzene	50.00	51.42	103	53.11	106	74-128	65-137	3	0-20	
1,3,5-Trimethylbenzene	50.00	51.16	102	54.11	108	77-131	68-140	6	0-20	
Vinyl Acetate	50.00	47.33	95	45.71	91	50-150	33-167	3	0-20	
Vinyl Chloride	50.00	45.15	90	48.96	98	63-129	52-140	8	0-20	
p/m-Xylene	100.0	107.0	107	112.4	112	80-122	73-129	5	0-20	
o-Xylene	50.00	53.87	108	56.44	113	80-128	72-136	5	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	44.20	88	44.09	88	69-123	60-132	0	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 2

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 18-09-1373

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	1173	GC/MS FFF	2
EPA 8270C (M) SIM Isotope Dil	EPA 3510C	1117	GC/MS DDD	1


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

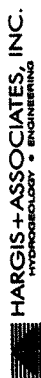
Work Order: 18-09-1373

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



HARGIS+ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes

QA Manager Tyler Evans

Phone 858-455-6500

18-09-1373

Date: 9/19/18
Page 1 of 2

Project	LAB ID	Sampled By:	SAMPLE COLLECTION		MATRIX	PRESERVATION	CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION	SPECIAL HANDLING	REMARKS
			Date	Time							
BCI Fullerton 764.10		A. DONNELLY A. JANZON									
	1	TB-091918	9/19/18	0800	Groundwater		40-ml VOA				
	2	UB-01		0828	Lab prepared water		500 mL Amber				
	3	S-04		0837							
	4	LAX-03		0908							
	5	RB-091918B		0922							
	6	AB-03		0934							
	7	S-14		0947							
	8	VAX-02		1002							
	9	VAX-0200		1004							
	10	VA-02		1030							
	11	S-07		1041							
	12	UB-03		1100							
Total number of containers per analysis:											
Relinquished By: / Company:					Date / Time Received By: / Company					Date / Time	
AD Donnelly / H+A					9/19/18 1240					9/19/18 1240	
Relinquished By: / Company:					Date / Time Received By: / Company					Date / Time	
JD					9/19/18 1310					9/19/18 1310	

☐	No. of containers correct
☐	Received in good condition
☐	Custody seals secure
☐	Conforms to COC document

Send Results to:

Ken Puentes

9171 Towne Centre Drive

Suite 375

San Diego, CA 92122

Ph: 858-455-6500

kpuentes@hargis.com

Temperature on receipt

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: Hargis + Associates

DATE: 09/19/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 3.0 °C (w/ CF): 2.5 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UGL

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A Checked by: UGL

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A Checked by: H4MW

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☒	☐	☐
COC document(s) received complete	☒	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers ☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☒	☐	☐
Sample container label(s) consistent with COC	☒	☐	☐
Sample container(s) intact and in good condition	☒	☐	☐
Proper containers for analyses requested	☒	☐	☐
Sufficient volume/mass for analyses requested	☒	☐	☐
Samples received within holding time	☒	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☒
Proper preservation chemical(s) noted on COC and/or sample container	☒	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☒
Container(s) for certain analysis free of headspace	☐	☒	☐
☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500) ☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☒

CONTAINER TYPE: 10 (Trip Blank Lot Number: 180 829 B)

Aqueous: ☐ VOA ☒ VOAn ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☒ 500AGB ☒ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna₂ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (____): ☐ _____ ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: H4MW

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH Reviewed by: UPSO

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: Hargis + Associates

DATE: 09/19/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.5 °C (w/ CF): 2.0 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UGLI

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: UGLI

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: H4MW

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☒	☐	☐
COC document(s) received complete	☒	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☒	☐	☐
Sample container label(s) consistent with COC	☒	☐	☐
Sample container(s) intact and in good condition	☒	☐	☐
Proper containers for analyses requested	☒	☐	☐
Sufficient volume/mass for analyses requested	☒	☐	☐
Samples received within holding time	☒	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☒
Proper preservation chemical(s) noted on COC and/or sample container	☒	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☒
Container(s) for certain analysis free of headspace.....	☒	☐	☐
☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☒

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☒ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBznna (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☒ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna₂ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (____): ☐ _____ ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: H4MW

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: UGLI

SAMPLE ANOMALY REPORT

DATE: 09 / 19 / 2018

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☐ Client sample label(s) do not match COC (comment)
 - ☐ Project information
 - ☐ Client sample ID
 - ☐ Sampling date and/or time
 - ☐ Number of container(s)
 - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
 - ☐ Broken
 - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
 - ☐ Flat
 - ☐ Very low in volume
 - ☐ Leaking (not transferred; duplicate bag submitted)
 - ☐ Leaking (transferred into ECI Tedlar™ bags*)
 - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

MISCELLANEOUS: (Describe)

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**
9	C	3			
23	B,C	3			

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments: _____

Reported by: H4 MW
Reviewed by: LF30

** Record the total number of containers (i.e., vials or bottles) for the affected sample.



WORK ORDER NUMBER: 18-09-1486

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Building 684 - Raytheon / 764.10

Attention: Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122-6215

A handwritten signature in black ink, appearing to read "Virendra Patel".

Approved for release on 09/28/2018 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon / 764.10
 Work Order Number: 18-09-1486

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	6
	4.1 1,4-Dioxane by EPA 8270C (M) SIM Isotope Dilution (Aqueous).	6
	4.2 EPA 8260B Volatile Organics (Aqueous).	7
5	Quality Control Sample Data.	19
	5.1 MS/MSD.	19
	5.2 LCS/LCSD.	22
6	Sample Analysis Summary.	27
7	Glossary of Terms and Qualifiers.	28
8	Chain-of-Custody/Sample Receipt Form.	29

Work Order Narrative

Work Order: 18-09-1486Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/20/18. They were assigned to Work Order 18-09-1486.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: Hargis + Associates, Inc.	Work Order: 18-09-1486
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon / 764.10
San Diego, CA 92122-6215	PO Number:
	Date/Time Received: 09/20/18 12:00
	Number of Containers: 14

Attn: Ken Puentes

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-092018	18-09-1486-1	09/20/18 08:00	2	Aqueous
HEW-02	18-09-1486-2	09/20/18 08:15	4	Aqueous
HEW-05	18-09-1486-3	09/20/18 08:40	4	Aqueous
HEW-0500	18-09-1486-4	09/20/18 08:42	4	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-09-1486
 Project Name: Building 684 - Raytheon / 764.10
 Received: 09/20/18

Attn: Ken Puentes

Page 1 of 1

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
HEW-02 (18-09-1486-2)						
1,1-Dichloroethene	0.51	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.42	J	0.33*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	150		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-05 (18-09-1486-3)						
c-1,2-Dichloroethene	0.47	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	180		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-0500 (18-09-1486-4)						
c-1,2-Dichloroethene	0.94	J	0.34*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	180		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

Return to Contents

* MDL is shown

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-02	18-09-1486-2-D	09/20/18 08:15	Aqueous	GC/MS DDD	09/21/18	09/21/18 21:02	180921L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	59	56-123	
1,4-Dioxane-d8(IDS-IS)	37	30-120	

HEW-05	18-09-1486-3-D	09/20/18 08:40	Aqueous	GC/MS DDD	09/21/18	09/21/18 21:18	180921L01
--------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	67	56-123	
1,4-Dioxane-d8(IDS-IS)	43	30-120	

HEW-0500	18-09-1486-4-D	09/20/18 08:42	Aqueous	GC/MS DDD	09/21/18	09/21/18 21:34	180921L01
----------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	74	56-123	
1,4-Dioxane-d8(IDS-IS)	40	30-120	

Method Blank	099-16-216-1497	N/A	Aqueous	GC/MS DDD	09/21/18	09/21/18 18:25	180921L01
--------------	-----------------	-----	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	80	56-123	
1,4-Dioxane-d8(IDS-IS)	34	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-092018	18-09-1486-1-A	09/20/18 08:00	Aqueous	GC/MS LL	09/26/18	09/27/18 03:15	180926L046

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	88	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	112	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-02	18-09-1486-2-A	09/20/18 08:15	Aqueous	GC/MS LL	09/26/18	09/27/18 04:10	180926L046

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	0.51	1.0	0.34	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 4 of 12

Parameter	Result	RL	MDL	DF	Qualifiers
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	0.42	1.0	0.33	1.00	J
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	150	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	110	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 5 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-05	18-09-1486-3-B	09/20/18 08:40	Aqueous	GC/MS T	09/27/18	09/27/18 16:54	180927L016

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	0.47	1.0	0.34	1.00	J
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 6 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	180	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 7 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-0500	18-09-1486-4-B	09/20/18 08:42	Aqueous	GC/MS T	09/27/18	09/27/18 17:26	180927L016

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	0.94	1.0	0.34	1.00	J
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 8 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	180	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 9 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-26997	N/A	Aqueous	GC/MS LL	09/26/18	09/27/18 02:48	180926L046

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 10 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	87	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	107	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 11 of 12

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-27001	N/A	Aqueous	GC/MS T	09/27/18	09/27/18 15:50	180927L016

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.30	1.00	
Bromobenzene	ND	1.0	0.32	1.00	
Bromochloromethane	ND	2.0	0.60	1.00	
Bromodichloromethane	ND	1.0	0.34	1.00	
Bromoform	ND	5.0	1.7	1.00	
Bromomethane	ND	50	18	1.00	
2-Butanone	ND	20	6.9	1.00	
n-Butylbenzene	ND	1.0	0.31	1.00	
sec-Butylbenzene	ND	1.0	0.28	1.00	
tert-Butylbenzene	ND	1.0	0.35	1.00	
Carbon Disulfide	ND	10	0.68	1.00	
Carbon Tetrachloride	ND	2.0	1.0	1.00	
Chlorobenzene	ND	1.0	0.30	1.00	
Chloroethane	ND	5.0	0.75	1.00	
Chloroform	ND	1.0	0.34	1.00	
Chloromethane	ND	10	0.59	1.00	
2-Chlorotoluene	ND	1.0	0.30	1.00	
4-Chlorotoluene	ND	1.0	0.28	1.00	
Dibromochloromethane	ND	2.0	0.53	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.0	1.00	
1,2-Dibromoethane	ND	1.0	0.39	1.00	
Dibromomethane	ND	1.0	0.44	1.00	
1,2-Dichlorobenzene	ND	1.0	0.28	1.00	
1,3-Dichlorobenzene	ND	1.0	0.29	1.00	
1,4-Dichlorobenzene	ND	1.0	0.32	1.00	
Dichlorodifluoromethane	ND	5.0	1.5	1.00	
1,1-Dichloroethane	ND	1.0	0.42	1.00	
1,2-Dichloroethane	ND	1.0	0.32	1.00	
1,1-Dichloroethene	ND	1.0	0.34	1.00	
c-1,2-Dichloroethene	ND	1.0	0.34	1.00	
t-1,2-Dichloroethene	ND	1.0	0.47	1.00	
1,2-Dichloropropane	ND	1.0	0.34	1.00	
1,3-Dichloropropane	ND	1.0	0.28	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 12 of 12

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.42	1.00	
1,1-Dichloropropene	ND	1.0	0.30	1.00	
c-1,3-Dichloropropene	ND	0.50	0.29	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.26	1.00	
2-Hexanone	ND	10	5.0	1.00	
Isopropylbenzene	ND	1.0	0.27	1.00	
p-Isopropyltoluene	ND	1.0	0.31	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.26	1.00	
Styrene	ND	1.0	0.24	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.50	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.32	1.00	
Tetrachloroethene	ND	1.0	0.33	1.00	
Toluene	ND	1.0	0.29	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.30	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.39	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.66	1.00	
1,1,2-Trichloroethane	ND	1.0	0.31	1.00	
Trichloroethene	ND	1.0	0.33	1.00	
Trichlorofluoromethane	ND	10	1.8	1.00	
1,2,3-Trichloropropane	ND	5.0	0.30	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.29	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	2.7	1.00	
Vinyl Chloride	ND	5.0	1.4	1.00	
p/m-Xylene	ND	2.0	0.56	1.00	
o-Xylene	ND	1.0	0.27	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.30	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/20/18
Work Order: 18-09-1486
Preparation: EPA 3510C
Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
18-09-1510-2	Sample	Aqueous	GC/MS DDD	09/21/18	09/21/18 19:28	180921S01				
18-09-1510-2	Matrix Spike	Aqueous	GC/MS DDD	09/21/18	09/21/18 18:57	180921S01				
18-09-1510-2	Matrix Spike Duplicate	Aqueous	GC/MS DDD	09/21/18	09/21/18 19:12	180921S01				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	ND	20.00	17.06	85	16.53	83	50-130	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/20/18
Work Order: 18-09-1486
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 3

Quality Control Sample ID	Type		Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number		
HEW-02	Sample		Aqueous		GC/MS LL	09/26/18	09/27/18 04:10	180926S015		
HEW-02	Matrix Spike		Aqueous		GC/MS LL	09/26/18	09/27/18 04:37	180926S015		
HEW-02	Matrix Spike Duplicate		Aqueous		GC/MS LL	09/26/18	09/27/18 05:04	180926S015		
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	26.76	54	28.76	58	34-166	7	0-33	
Benzene	ND	50.00	39.58	79	39.03	78	75-125	1	0-20	
Bromobenzene	ND	50.00	43.14	86	43.14	86	75-125	0	0-20	
Bromochloromethane	ND	50.00	42.45	85	42.68	85	75-125	1	0-20	
Bromodichloromethane	ND	50.00	44.27	89	43.72	87	75-134	1	0-20	
Bromoform	ND	50.00	38.40	77	41.10	82	74-134	7	0-20	
Bromomethane	ND	50.00	42.00	84	38.90	78	20-168	8	0-40	
2-Butanone	ND	50.00	34.78	70	33.36	67	37-157	4	0-20	
n-Butylbenzene	ND	50.00	40.61	81	41.52	83	73-145	2	0-20	
sec-Butylbenzene	ND	50.00	41.79	84	43.32	87	75-135	4	0-20	
tert-Butylbenzene	ND	50.00	41.92	84	43.32	87	75-136	3	0-20	
Carbon Disulfide	ND	50.00	36.25	72	37.11	74	50-152	2	0-27	
Carbon Tetrachloride	ND	50.00	40.40	81	40.59	81	70-154	0	0-20	
Chlorobenzene	ND	50.00	44.69	89	44.45	89	75-125	1	0-20	
Chloroethane	ND	50.00	42.41	85	43.90	88	41-167	3	0-26	
Chloroform	ND	50.00	43.08	86	42.73	85	75-127	1	0-20	
Chloromethane	ND	50.00	40.43	81	40.35	81	41-149	0	0-20	
2-Chlorotoluene	ND	50.00	42.76	86	42.62	85	75-128	0	0-20	
4-Chlorotoluene	ND	50.00	41.96	84	43.69	87	75-125	4	0-20	
Dibromochloromethane	ND	50.00	41.31	83	41.22	82	75-131	0	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	41.96	84	43.48	87	64-142	4	0-20	
1,2-Dibromoethane	ND	50.00	42.83	86	42.98	86	75-129	0	0-20	
Dibromomethane	ND	50.00	44.12	88	43.37	87	75-125	2	0-20	
1,2-Dichlorobenzene	ND	50.00	43.29	87	44.58	89	75-125	3	0-20	
1,3-Dichlorobenzene	ND	50.00	41.74	83	42.62	85	75-125	2	0-20	
1,4-Dichlorobenzene	ND	50.00	41.14	82	42.59	85	75-125	3	0-20	
Dichlorodifluoromethane	ND	50.00	33.96	68	33.80	68	25-157	0	0-26	
1,1-Dichloroethane	ND	50.00	37.32	75	37.05	74	73-139	1	0-20	
1,2-Dichloroethane	ND	50.00	45.18	90	43.71	87	75-125	3	0-20	
1,1-Dichloroethene	ND	50.00	38.37	77	37.91	76	61-145	1	0-20	
c-1,2-Dichloroethene	ND	50.00	41.96	84	41.72	83	75-125	1	0-20	
t-1,2-Dichloroethene	ND	50.00	38.96	78	39.19	78	64-142	1	0-20	
1,2-Dichloropropane	ND	50.00	43.35	87	42.55	85	75-127	2	0-20	
1,3-Dichloropropane	ND	50.00	46.10	92	46.45	93	75-125	1	0-20	
2,2-Dichloropropane	ND	50.00	34.32	69	34.20	68	24-180	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/20/18
Work Order: 18-09-1486
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 3

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	39.36	79	38.86	78	75-135	1	0-20	
c-1,3-Dichloropropene	ND	50.00	37.84	76	37.41	75	75-137	1	0-20	
t-1,3-Dichloropropene	ND	50.00	37.15	74	37.24	74	74-146	0	0-20	
Ethylbenzene	ND	50.00	43.15	86	43.50	87	75-129	1	0-20	
2-Hexanone	ND	50.00	39.02	78	39.71	79	47-161	2	0-20	
Isopropylbenzene	ND	50.00	42.82	86	42.82	86	75-135	0	0-20	
p-Isopropyltoluene	ND	50.00	41.15	82	41.96	84	75-136	2	0-20	
Methylene Chloride	ND	50.00	39.99	80	40.30	81	63-141	1	0-20	
4-Methyl-2-Pentanone	ND	50.00	38.81	78	39.28	79	66-138	1	0-20	
Naphthalene	ND	50.00	36.41	73	35.87	72	59-143	2	0-20	
n-Propylbenzene	ND	50.00	42.86	86	42.38	85	75-133	1	0-20	
Styrene	ND	50.00	35.57	71	31.14	62	70-142	13	0-28	3
1,1,1,2-Tetrachloroethane	ND	50.00	46.03	92	45.22	90	75-139	2	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	41.07	82	42.82	86	61-145	4	0-20	
Tetrachloroethene	ND	50.00	43.08	86	43.18	86	47-143	0	0-20	
Toluene	ND	50.00	40.62	81	40.31	81	75-125	1	0-20	
1,2,3-Trichlorobenzene	ND	50.00	40.72	81	41.53	83	73-133	2	0-20	
1,2,4-Trichlorobenzene	ND	50.00	38.78	78	39.42	79	71-137	2	0-20	
1,1,1-Trichloroethane	ND	50.00	39.88	80	39.34	79	75-136	1	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	35.95	72	35.47	71	42-168	1	0-22	
1,1,2-Trichloroethane	ND	50.00	46.06	92	45.49	91	75-125	1	0-20	
Trichloroethene	146.4	50.00	160.7	29	162.4	32	67-139	1	0-20	3
Trichlorofluoromethane	ND	50.00	43.55	87	44.22	88	59-155	2	0-20	
1,2,3-Trichloropropane	ND	50.00	42.78	86	43.07	86	75-127	1	0-20	
1,2,4-Trimethylbenzene	ND	50.00	38.43	77	36.95	74	75-133	4	0-20	3
1,3,5-Trimethylbenzene	ND	50.00	42.36	85	41.61	83	75-135	2	0-20	
Vinyl Acetate	ND	50.00	26.27	53	26.23	52	54-180	0	0-25	3
Vinyl Chloride	ND	50.00	41.41	83	42.48	85	51-153	3	0-20	
p/m-Xylene	ND	100.0	83.95	84	82.78	83	75-133	1	0-20	
o-Xylene	ND	50.00	43.02	86	43.00	86	75-134	0	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	34.26	69	33.37	67	64-136	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-216-1497	LCS	Aqueous	GC/MS DDD	09/21/18	09/21/18 18:41	180921L01
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
1,4-Dioxane		20.00	15.92	80	50-130	



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 09/20/18
Work Order: 18-09-1486
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 5

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-001-27001	LCS	Aqueous		GC/MS T	09/27/18	09/27/18 13:39	180927L016			
099-14-001-27001	LCSD	Aqueous		GC/MS T	09/27/18	09/27/18 14:12	180927L016			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	44.94	90	45.77	92	53-137	39-151	2	0-21	
Benzene	50.00	49.35	99	50.77	102	79-121	72-128	3	0-20	
Bromobenzene	50.00	49.92	100	52.11	104	80-120	73-127	4	0-20	
Bromochloromethane	50.00	46.47	93	46.69	93	80-122	73-129	0	0-20	
Bromodichloromethane	50.00	52.13	104	53.50	107	80-124	73-131	3	0-20	
Bromoform	50.00	47.61	95	49.01	98	73-127	64-136	3	0-20	
Bromomethane	50.00	39.59	79	40.73	81	50-150	33-167	3	0-26	
2-Butanone	50.00	53.01	106	53.30	107	60-126	49-137	1	0-20	
n-Butylbenzene	50.00	58.60	117	60.43	121	72-138	61-149	3	0-20	
sec-Butylbenzene	50.00	55.38	111	57.03	114	77-131	68-140	3	0-20	
tert-Butylbenzene	50.00	59.34	119	60.20	120	80-125	72-132	1	0-20	
Carbon Disulfide	50.00	52.20	104	53.16	106	50-150	33-167	2	0-22	
Carbon Tetrachloride	50.00	52.89	106	53.34	107	65-143	52-156	1	0-20	
Chlorobenzene	50.00	49.23	98	51.17	102	80-120	73-127	4	0-20	
Chloroethane	50.00	47.72	95	48.94	98	62-128	51-139	3	0-20	
Chloroform	50.00	49.84	100	51.37	103	80-120	73-127	3	0-20	
Chloromethane	50.00	42.13	84	44.97	90	43-133	28-148	7	0-20	
2-Chlorotoluene	50.00	51.68	103	53.62	107	80-121	73-128	4	0-20	
4-Chlorotoluene	50.00	52.07	104	55.17	110	80-120	73-127	6	0-20	
Dibromochloromethane	50.00	52.68	105	55.07	110	80-123	73-130	4	0-20	
1,2-Dibromo-3-Chloropropane	50.00	53.72	107	55.93	112	66-126	56-136	4	0-20	
1,2-Dibromoethane	50.00	49.75	99	52.35	105	80-120	73-127	5	0-20	
Dibromomethane	50.00	49.58	99	51.24	102	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	51.92	104	53.82	108	80-120	73-127	4	0-20	
1,3-Dichlorobenzene	50.00	51.80	104	54.17	108	80-120	73-127	4	0-20	
1,4-Dichlorobenzene	50.00	50.29	101	52.62	105	80-120	73-127	5	0-20	
Dichlorodifluoromethane	50.00	61.96	124	60.00	120	50-150	33-167	3	0-30	
1,1-Dichloroethane	50.00	44.80	90	46.12	92	72-126	63-135	3	0-20	
1,2-Dichloroethane	50.00	48.94	98	50.69	101	76-120	69-127	4	0-20	
1,1-Dichloroethene	50.00	50.97	102	52.11	104	66-132	55-143	2	0-20	
c-1,2-Dichloroethene	50.00	50.63	101	52.40	105	78-120	71-127	3	0-20	
t-1,2-Dichloroethene	50.00	50.98	102	51.82	104	66-132	55-143	2	0-20	
1,2-Dichloropropane	50.00	50.55	101	51.93	104	80-120	73-127	3	0-20	
1,3-Dichloropropane	50.00	50.00	100	52.30	105	80-120	73-127	5	0-20	
2,2-Dichloropropane	50.00	77.61	155	79.12	158	50-150	33-167	2	0-20	ME
1,1-Dichloropropene	50.00	51.27	103	51.92	104	75-123	67-131	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/20/18
Work Order: 18-09-1486
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 5

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	58.31	117	59.96	120	77-131	68-140	3	0-20	
t-1,3-Dichloropropene	50.00	58.47	117	60.38	121	76-136	66-146	3	0-20	
Ethylbenzene	50.00	51.38	103	53.26	107	80-120	73-127	4	0-20	
2-Hexanone	50.00	52.54	105	54.69	109	63-123	53-133	4	0-20	
Isopropylbenzene	50.00	53.80	108	55.77	112	80-128	72-136	4	0-20	
p-Isopropyltoluene	50.00	56.42	113	58.34	117	73-133	63-143	3	0-20	
Methylene Chloride	50.00	48.28	97	49.42	99	61-133	49-145	2	0-27	
4-Methyl-2-Pentanone	50.00	52.63	105	53.77	108	65-125	55-135	2	0-20	
Naphthalene	50.00	53.75	108	56.03	112	69-129	59-139	4	0-20	
n-Propylbenzene	50.00	52.99	106	55.45	111	80-128	72-136	5	0-20	
Styrene	50.00	53.94	108	56.23	112	80-126	72-134	4	0-20	
1,1,1,2-Tetrachloroethane	50.00	52.37	105	54.64	109	80-129	72-137	4	0-20	
1,1,2,2-Tetrachloroethane	50.00	57.32	115	59.07	118	74-122	66-130	3	0-20	
Tetrachloroethene	50.00	30.61	61	32.30	65	55-139	41-153	5	0-23	
Toluene	50.00	50.44	101	51.60	103	80-120	73-127	2	0-20	
1,2,3-Trichlorobenzene	50.00	53.64	107	56.26	113	72-132	62-142	5	0-20	
1,2,4-Trichlorobenzene	50.00	55.86	112	57.69	115	74-134	64-144	3	0-20	
1,1,1-Trichloroethane	50.00	48.80	98	49.64	99	76-124	68-132	2	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	49.94	100	50.46	101	54-150	38-166	1	0-30	
1,1,2-Trichloroethane	50.00	49.60	99	52.47	105	80-120	73-127	6	0-20	
Trichloroethene	50.00	46.07	92	47.55	95	79-121	72-128	3	0-20	
Trichlorofluoromethane	50.00	51.39	103	52.15	104	72-132	62-142	1	0-20	
1,2,3-Trichloropropane	50.00	53.25	107	55.88	112	75-123	67-131	5	0-20	
1,2,4-Trimethylbenzene	50.00	54.47	109	56.77	114	74-128	65-137	4	0-20	
1,3,5-Trimethylbenzene	50.00	54.31	109	56.52	113	77-131	68-140	4	0-20	
Vinyl Acetate	50.00	96.75	193	98.36	197	50-150	33-167	2	0-20	X
Vinyl Chloride	50.00	53.69	107	54.38	109	63-129	52-140	1	0-20	
p/m-Xylene	100.0	106.7	107	111.7	112	80-122	73-129	5	0-20	
o-Xylene	50.00	54.11	108	56.71	113	80-128	72-136	5	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	44.16	88	45.21	90	69-123	60-132	2	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 1

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 09/20/18
 Work Order: 18-09-1486
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-26997	LCS	Aqueous	GC/MS LL	09/26/18	09/27/18 01:53	180926L046
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acetone	50.00	31.31	63	53-137	39-151	
Benzene	50.00	41.66	83	79-121	72-128	
Bromobenzene	50.00	45.12	90	80-120	73-127	
Bromochloromethane	50.00	44.48	89	80-122	73-129	
Bromodichloromethane	50.00	45.86	92	80-124	73-131	
Bromoform	50.00	41.89	84	73-127	64-136	
Bromomethane	50.00	41.73	83	50-150	33-167	
2-Butanone	50.00	41.00	82	60-126	49-137	
n-Butylbenzene	50.00	45.41	91	72-138	61-149	
sec-Butylbenzene	50.00	45.54	91	77-131	68-140	
tert-Butylbenzene	50.00	43.10	86	80-125	72-132	
Carbon Disulfide	50.00	38.86	78	50-150	33-167	
Carbon Tetrachloride	50.00	43.70	87	65-143	52-156	
Chlorobenzene	50.00	46.50	93	80-120	73-127	
Chloroethane	50.00	44.05	88	62-128	51-139	
Chloroform	50.00	45.49	91	80-120	73-127	
Chloromethane	50.00	41.78	84	43-133	28-148	
2-Chlorotoluene	50.00	45.11	90	80-121	73-128	
4-Chlorotoluene	50.00	45.96	92	80-120	73-127	
Dibromochloromethane	50.00	43.61	87	80-123	73-130	
1,2-Dibromo-3-Chloropropane	50.00	45.32	91	66-126	56-136	
1,2-Dibromoethane	50.00	44.68	89	80-120	73-127	
Dibromomethane	50.00	44.87	90	80-120	73-127	
1,2-Dichlorobenzene	50.00	46.57	93	80-120	73-127	
1,3-Dichlorobenzene	50.00	45.10	90	80-120	73-127	
1,4-Dichlorobenzene	50.00	45.27	91	80-120	73-127	
Dichlorodifluoromethane	50.00	35.33	71	50-150	33-167	
1,1-Dichloroethane	50.00	39.48	79	72-126	63-135	
1,2-Dichloroethane	50.00	46.40	93	76-120	69-127	
1,1-Dichloroethene	50.00	43.12	86	66-132	55-143	
c-1,2-Dichloroethene	50.00	44.80	90	78-120	71-127	
t-1,2-Dichloroethene	50.00	42.06	84	66-132	55-143	
1,2-Dichloropropane	50.00	44.87	90	80-120	73-127	
1,3-Dichloropropane	50.00	48.21	96	80-120	73-127	
2,2-Dichloropropane	50.00	39.50	79	50-150	33-167	
1,1-Dichloropropene	50.00	42.39	85	75-123	67-131	
c-1,3-Dichloropropene	50.00	41.27	83	77-131	68-140	
t-1,3-Dichloropropene	50.00	40.52	81	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 09/20/18
Work Order: 18-09-1486
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 5 of 5

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	45.86	92	80-120	73-127	
2-Hexanone	50.00	42.63	85	63-123	53-133	
Isopropylbenzene	50.00	45.26	91	80-128	72-136	
p-Isopropyltoluene	50.00	45.42	91	73-133	63-143	
Methylene Chloride	50.00	42.16	84	61-133	49-145	
4-Methyl-2-Pentanone	50.00	40.89	82	65-125	55-135	
Naphthalene	50.00	43.65	87	69-129	59-139	
n-Propylbenzene	50.00	45.06	90	80-128	72-136	
Styrene	50.00	47.47	95	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	47.96	96	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	40.22	80	74-122	66-130	
Tetrachloroethene	50.00	55.54	111	55-139	41-153	
Toluene	50.00	42.58	85	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	45.70	91	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	44.27	89	74-134	64-144	
1,1,1-Trichloroethane	50.00	42.35	85	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	39.84	80	54-150	38-166	
1,1,2-Trichloroethane	50.00	47.67	95	80-120	73-127	
Trichloroethene	50.00	46.59	93	79-121	72-128	
Trichlorofluoromethane	50.00	46.03	92	72-132	62-142	
1,2,3-Trichloropropane	50.00	44.95	90	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	45.08	90	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	45.25	90	77-131	68-140	
Vinyl Acetate	50.00	34.03	68	50-150	33-167	
Vinyl Chloride	50.00	44.24	88	63-129	52-140	
p/m-Xylene	100.0	88.45	88	80-122	73-129	
o-Xylene	50.00	45.11	90	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	36.40	73	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

Sample Analysis Summary Report

Work Order: 18-09-1486

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	867	GC/MS T	2
EPA 8260B	EPA 5030C	867	GC/MS LL	2
EPA 8270C (M) SIM Isotope Dil	EPA 3510C	1117	GC/MS DDD	1


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 18-09-1486

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Virendra Patel

From: Andrew Donnelly <ADONNELLY@HARGIS.COM>
Sent: Friday, September 21, 2018 11:50 AM
To: Virendra Patel
Cc: Erick Ovalle
Subject: Re: Sample receipt confirmation / 18-09-1486 / Building 684 - Raytheon / 764.10
Attachments: image001.jpg; image002.jpg; image003.jpg

EXTERNAL EMAIL*

All samples were collected on 9/20/18 for these samples. The COC can remain unedited. Thank you!

Andrew

Sent from my Verizon, Samsung Galaxy smartphone

----- Original message -----

From: Virendra Patel <VirendraPatel@eurofinsUS.com>
 Date: 9/21/18 11:36 AM (GMT-08:00)
 To: Andrew Donnelly <ADONNELLY@HARGIS.COM>
 Cc: Erick Ovalle <ErickOvalle@eurofinsUS.com>
 Subject: FW: Sample receipt confirmation / 18-09-1486 / Building 684 - Raytheon / 764.10

Andrew,

Hi. Can you please review and provide an updated COC if necessary. Thanks!

Best Regards,

Virendra Patel
 Project Manager

Eurofins Calscience
 7440 Lincoln Way
 Garden Grove, CA 92841
 USA
 P: +1 714 895 5494
 F: +1 714 894 7501

Email: virendrapatel@eurofinsUS.com<<mailto:virendrapatel@eurofinsUS.com>>
 Website: www.eurofinsUS.com/Calscience<<http://www.eurofinsus.com/Calscience>>

[Facebook_logo_email]<<https://www.facebook.com/EurofinsEnvTesting>> [LinkedIn_logo_email]
 <<https://www.linkedin.com/company-beta/6464555>>

The information transmitted is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you receive this in error, please contact the sender and delete the material from any computer. Email transmission cannot be guaranteed to be secure or error free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete. The sender

therefore is in no way liable for any errors or omissions in the content of this message which may arise as a result of email transmission. If verification is required, please request a hard copy. We take reasonable precautions to ensure our emails are free from viruses. You need, however, to verify that this email and any attachments are free of viruses, as we can take no responsibility for any computer viruses, which might be transferred by way of this email. We may monitor all email communication through our networks. If you contact us by email, we may store your name and address to facilitate communication.

From: Erick Ovalle

Sent: Friday, September 21, 2018 10:16 AM

To: JKelly@HARGIS.COM; Ken Puentes <kpuentes@HARGIS.COM>; MMorales@Hargis.com; Nadja Scholl; Tyler Evans <TEvans@HARGIS.COM>

Cc: Virendra Patel

Subject: Sample receipt confirmation / 18-09-1486 / Building 684 - Raytheon / 764.10

Sample receipt confirmation attached. Please review and advise of any changes required.

Sample 1: The collection date listed on the container does not match the collection date on the COC. Please see below and advise what is the correct date?

[\[cid:image001.jpg@01D45194.16285A60\]](#)

Please call with any questions or concerns.

Best Regards,
Erick Ovalle
Project Manager Assistant

Eurofins Calscience
7440 Lincoln Way
Garden Grove, CA 92841-1427
USA
Phone: +1 (714) 895-5494

The information transmitted is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you receive this in error, please contact the sender and delete the material from any computer. Email transmission cannot be guaranteed to be secure or error free as information could be intercepted, corrupted, lost, destroyed, arrive late or incomplete. The sender therefore is in no way liable for any errors or omissions in the content of this message which may arise as a result of email transmission. If verification is required, please request a hard copy. We take reasonable precautions to ensure our emails are free from viruses. You need, however, to verify that this email and any attachments are free of viruses, as we can take no responsibility for any computer viruses, which might be transferred by way of this email. We may monitor all email communication through our networks. If you contact us by email, we may store your name and address to facilitate communication.

* WARNING - EXTERNAL: This email originated from outside of Eurofins. Do not click any links or open any attachments unless you trust the sender and know that the content is safe!

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager Tyler Evans
Phone 858-455-6500

Date: 9/26/18
Page 1 of 1

18-09-1486

[illegible]

Total number of containers per analysis:

Account Number	Contributor	Per	Analysis	Date / Time	Received By: / Company	Date / Time
QD only	H+A			9/20/18 1100	<i>[Signature]</i> Ec	9/20/18 1100
Relinquished By: / Company:				Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i>				9/20/18 1100	<i>[Signature]</i> Ec	9/20/18 1100

	No. of containers correct
	Received in good condition
	Custody seals secure
	Conforms to COC document

Send Results to:

Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

Temperature on receipt

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Hargis + Assoc.

DATE: 09/20/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.5°C); Temperature (w/o CF): 2.5 °C (w/ CF): 2.0 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UGLI

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: UGLI

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: UFSO

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☒	☐	☐
COC document(s) received complete	☒	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☒	☐	☐
Sample container label(s) consistent with COC	☒	☐	☐
Sample container(s) intact and in good condition	☒	☐	☐
Proper containers for analyses requested	☒	☐	☐
Sufficient volume/mass for analyses requested	☒	☐	☐
Samples received within holding time	☒	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☒
Proper preservation chemical(s) noted on COC and/or sample container	☒	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☒
Container(s) for certain analysis free of headspace	☒	☐	☐
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☒

CONTAINER TYPE:

(Trip Blank Lot Number: 18082913)

Aqueous: ☐ VOA ☒ VOA_n ☐ VOA_{n2} ☐ 100PJ ☐ 100PJ_{n2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB ☐ 125PB_{znna} (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PB_n (pH__2) ☒ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGB_{n2} ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PB_n (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (____): ☐ _____ ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: UFSO

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: _____

SAMPLE ANOMALY REPORT

DATE: 09 / 29 / 2018

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☒ Client sample label(s) do not match COC (comment)
 - ☐ Project information
 - ☐ Client sample ID
 - ☒ Sampling date and/or time
 - ☐ Number of container(s)
 - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
 - ☐ Broken
 - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
 - ☐ Flat
 - ☐ Very low in volume
 - ☐ Leaking (not transferred; duplicate bag submitted)
 - ☐ Leaking (transferred into ECI Tedlar™ bags*)
 - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

*GI Collection date per label,
9/19/18.*

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis

Comments: _____

Reported by: UFS
Reviewed by: H4MW

** Record the total number of containers (i.e., vials or bottles) for the affected sample.



WORK ORDER NUMBER: 18-12-1831

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Building 684 - Raytheon / 764.10

Attention: Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122-6215

A handwritten signature in black ink, which appears to read "Virendra Patel", enclosed within an oval-shaped stamp.

Approved for release on 01/02/2019 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon / 764.10
 Work Order Number: 18-12-1831

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	7
	4.1 1,4-Dioxane by EPA 8270C (M) SIM Isotope Dilution (Aqueous).	7
	4.2 EPA 8260B Volatile Organics (Aqueous).	11
5	Quality Control Sample Data.	41
	5.1 MS/MSD.	41
	5.2 LCS/LCSD.	44
6	Sample Analysis Summary.	47
7	Glossary of Terms and Qualifiers.	48
8	Chain-of-Custody/Sample Receipt Form.	49

Work Order Narrative

Work Order: 18-12-1831Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/20/18. They were assigned to Work Order 18-12-1831.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

DoD Projects:

The test results contained in this report are accredited under the laboratory's ISO/IEC 17025:2005 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation ADE-1864.

Sample Summary

Client: Hargis + Associates, Inc.	Work Order: 18-12-1831
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon / 764.10
San Diego, CA 92122-6215	PO Number:
	Date/Time Received: 12/20/18 11:00
	Number of Containers: 62
Attn: Ken Puentes	

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-121918	18-12-1831-1	12/19/18 07:30	2	Aqueous
LAX-02	18-12-1831-2	12/19/18 09:20	4	Aqueous
UAX-03	18-12-1831-3	12/19/18 10:20	4	Aqueous
RB-121918	18-12-1831-4	12/19/18 09:30	4	Aqueous
HEW-04	18-12-1831-5	12/19/18 12:15	12	Aqueous
LAX-03	18-12-1831-6	12/19/18 12:40	4	Aqueous
HEW-05	18-12-1831-7	12/20/18 07:40	4	Aqueous
HEW-02	18-12-1831-8	12/20/18 07:53	4	Aqueous
LAX-01	18-12-1831-9	12/20/18 08:15	4	Aqueous
UAX-01	18-12-1831-10	12/19/18 08:27	4	Aqueous
HEW-01	18-12-1831-11	12/19/18 09:07	4	Aqueous
HEW-03	18-12-1831-12	12/19/18 10:50	4	Aqueous
UAX-02	18-12-1831-13	12/19/18 12:45	4	Aqueous
UAX-0200	18-12-1831-14	12/19/18 12:47	4	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 18-12-1831
 Project Name: Building 684 - Raytheon / 764.10
 Received: 12/20/18

Attn: Ken Puentes

Page 1 of 2

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
UAX-03 (18-12-1831-3)						
1,1-Dichloroethene	0.68	J	0.22*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	11		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-04 (18-12-1831-5)						
1,1-Dichloroethene	1.5		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.6		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	160		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	6.4		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
HEW-05 (18-12-1831-7)						
Trichloroethene	140		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	0.43	J	0.28*	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
HEW-02 (18-12-1831-8)						
1,1-Dichloroethene	0.48	J	0.22*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	170		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.2		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
UAX-01 (18-12-1831-10)						
1,1-Dichloroethene	3.8		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	3.7		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-01 (18-12-1831-11)						
1,1-Dichloroethene	4.2	J	1.1*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	8.8		5.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	760		5.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.6		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
HEW-03 (18-12-1831-12)						
1,1-Dichloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	120		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	4.9		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C
UAX-02 (18-12-1831-13)						
1,1-Dichloroethene	4.3		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	4.8		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.7		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Work Order: 18-12-1831
Project Name: Building 684 - Raytheon / 764.10
Received: 12/20/18

Attn: Ken Puentes

Page 2 of 2

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
UAX-0200 (18-12-1831-14)						
1,1-Dichloroethene	4.4		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	4.5		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.3		1.0	ug/L	EPA 8270C (M) SIM Isotope Dil	EPA 3510C

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-02	18-12-1831-2-D	12/19/18 09:20	Aqueous	GC/MS DDD	12/24/18	12/28/18 14:48	181224L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	93	56-123	
1,4-Dioxane-d8(IDS-IS)	34	30-120	

UAX-03	18-12-1831-3-D	12/19/18 10:20	Aqueous	GC/MS DDD	12/24/18	12/28/18 17:10	181224L01
--------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	77	56-123	
1,4-Dioxane-d8(IDS-IS)	32	30-120	

RB-121918	18-12-1831-4-D	12/19/18 09:30	Aqueous	GC/MS DDD	12/24/18	12/28/18 16:22	181224L01
-----------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	99	56-123	
1,4-Dioxane-d8(IDS-IS)	35	30-120	

HEW-04	18-12-1831-5-J	12/19/18 12:15	Aqueous	GC/MS DDD	12/24/18	12/28/18 15:03	181224L01
--------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	6.4	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	88	56-123	
1,4-Dioxane-d8(IDS-IS)	33	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	18-12-1831-6-D	12/19/18 12:40	Aqueous	GC/MS DDD	12/24/18	12/28/18 16:38	181224L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	122	56-123	
1,4-Dioxane-d8(IDS-IS)	35	30-120	

HEW-05	18-12-1831-7-D	12/20/18 07:40	Aqueous	GC/MS DDD	12/24/18	12/28/18 16:54	181224L01
--------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	0.43	1.0	0.28	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	91	56-123	
1,4-Dioxane-d8(IDS-IS)	33	30-120	

HEW-02	18-12-1831-8-D	12/20/18 07:53	Aqueous	GC/MS DDD	12/24/18	12/28/18 17:26	181224L01
--------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.2	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	96	56-123	
1,4-Dioxane-d8(IDS-IS)	31	30-120	

LAX-01	18-12-1831-9-D	12/20/18 08:15	Aqueous	GC/MS DDD	12/24/18	12/28/18 17:41	181224L01
--------	----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	97	56-123	
1,4-Dioxane-d8(IDS-IS)	33	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-01	18-12-1831-10-D	12/19/18 08:27	Aqueous	GC/MS DDD	12/24/18	12/28/18 17:58	181224L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	88	56-123	
1,4-Dioxane-d8(IDS-IS)	34	30-120	

HEW-01	18-12-1831-11-D	12/19/18 09:07	Aqueous	GC/MS DDD	12/24/18	12/28/18 18:13	181224L01
--------	-----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.6	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	86	56-123	
1,4-Dioxane-d8(IDS-IS)	33	30-120	

HEW-03	18-12-1831-12-E	12/19/18 10:50	Aqueous	GC/MS DDD	12/24/18	12/28/18 18:29	181224L01
--------	-----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	4.9	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	83	56-123	
1,4-Dioxane-d8(IDS-IS)	33	30-120	

UAX-02	18-12-1831-13-D	12/19/18 12:45	Aqueous	GC/MS DDD	12/24/18	12/28/18 18:45	181224L01
--------	-----------------	----------------	---------	-----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.7	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	89	56-123	
1,4-Dioxane-d8(IDS-IS)	32	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-0200	18-12-1831-14-D	12/19/18 12:47	Aqueous	GC/MS DDD	12/24/18	12/28/18 19:00	181224L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.3	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	91	56-123	
1,4-Dioxane-d8(IDS-IS)	33	30-120	

Method Blank	099-16-216-1596	N/A	Aqueous	GC/MS DDD	12/24/18	12/28/18 13:44	181224L01
--------------	-----------------	-----	---------	-----------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Nitrobenzene-d5	92	56-123	
1,4-Dioxane-d8(IDS-IS)	50	30-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-121918	18-12-1831-1-A	12/19/18 07:30	Aqueous	GC/MS Z	12/29/18	12/29/18 18:00	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	ND	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-02	18-12-1831-2-A	12/19/18 09:20	Aqueous	GC/MS Z	12/29/18	12/29/18 19:20	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 4 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	ND	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 5 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-03	18-12-1831-3-A	12/19/18 10:20	Aqueous	GC/MS Z	12/29/18	12/29/18 19:47	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	0.68	1.0	0.22	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 6 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	11	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 7 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-121918	18-12-1831-4-A	12/19/18 09:30	Aqueous	GC/MS Z	12/29/18	12/29/18 20:13	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 8 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	ND	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 9 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-04	18-12-1831-5-A	12/19/18 12:15	Aqueous	GC/MS Z	12/29/18	12/29/18 18:53	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	1.5	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 10 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	1.6	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	160	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 11 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	18-12-1831-6-A	12/19/18 12:40	Aqueous	GC/MS Z	12/29/18	12/29/18 20:40	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 12 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	ND	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 13 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-05	18-12-1831-7-A	12/20/18 07:40	Aqueous	GC/MS Z	12/29/18	12/29/18 21:06	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 14 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	140	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 15 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-02	18-12-1831-8-A	12/20/18 07:53	Aqueous	GC/MS Z	12/29/18	12/29/18 21:33	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	0.48	1.0	0.22	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 16 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	170	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 17 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-01	18-12-1831-9-A	12/20/18 08:15	Aqueous	GC/MS Z	12/29/18	12/29/18 21:59	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 18 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	ND	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	109	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 19 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-01	18-12-1831-10-A	12/19/18 08:27	Aqueous	GC/MS Z	12/29/18	12/29/18 22:26	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	3.8	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 20 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	3.7	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 21 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-01	18-12-1831-11-A	12/19/18 09:07	Aqueous	GC/MS Z	12/29/18	12/30/18 01:03	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	100	50	5.00	
Benzene	ND	5.0	0.70	5.00	
Bromobenzene	ND	5.0	0.96	5.00	
Bromochloromethane	ND	10	2.3	5.00	
Bromodichloromethane	ND	5.0	1.2	5.00	
Bromoform	ND	25	9.2	5.00	
Bromomethane	ND	250	97	5.00	
2-Butanone	ND	100	33	5.00	
n-Butylbenzene	ND	5.0	1.5	5.00	
sec-Butylbenzene	ND	5.0	0.95	5.00	
tert-Butylbenzene	ND	5.0	1.2	5.00	
Carbon Disulfide	ND	50	3.5	5.00	
Carbon Tetrachloride	ND	2.5	1.2	5.00	
Chlorobenzene	ND	5.0	0.80	5.00	
Chloroethane	ND	25	3.8	5.00	
Chloroform	ND	5.0	0.92	5.00	
Chloromethane	ND	50	2.5	5.00	
2-Chlorotoluene	ND	5.0	0.82	5.00	
4-Chlorotoluene	ND	5.0	0.92	5.00	
Dibromochloromethane	ND	10	2.3	5.00	
1,2-Dibromo-3-Chloropropane	ND	25	10	5.00	
1,2-Dibromoethane	ND	5.0	1.3	5.00	
Dibromomethane	ND	5.0	1.5	5.00	
1,2-Dichlorobenzene	ND	5.0	0.72	5.00	
1,3-Dichlorobenzene	ND	5.0	0.93	5.00	
1,4-Dichlorobenzene	ND	5.0	1.2	5.00	
Dichlorodifluoromethane	ND	25	1.4	5.00	
1,1-Dichloroethane	ND	5.0	1.4	5.00	
1,2-Dichloroethane	ND	2.5	0.94	5.00	
1,1-Dichloroethene	4.2	5.0	1.1	5.00	J
c-1,2-Dichloroethene	ND	5.0	1.4	5.00	
t-1,2-Dichloroethene	ND	5.0	2.0	5.00	
1,2-Dichloropropane	ND	5.0	0.99	5.00	
1,3-Dichloropropane	ND	5.0	0.69	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 22 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	5.0	2.2	5.00	
1,1-Dichloropropene	ND	5.0	0.86	5.00	
c-1,3-Dichloropropene	ND	2.5	1.0	5.00	
t-1,3-Dichloropropene	ND	2.5	1.1	5.00	
Ethylbenzene	ND	5.0	0.69	5.00	
2-Hexanone	ND	50	26	5.00	
Isopropylbenzene	ND	5.0	0.81	5.00	
p-Isopropyltoluene	ND	5.0	1.1	5.00	
Methylene Chloride	ND	50	20	5.00	
4-Methyl-2-Pentanone	ND	50	2.3	5.00	
Naphthalene	ND	50	25	5.00	
n-Propylbenzene	ND	5.0	0.88	5.00	
Styrene	ND	5.0	0.73	5.00	
1,1,1,2-Tetrachloroethane	ND	10	2.1	5.00	
1,1,2,2-Tetrachloroethane	ND	50	0.86	5.00	
Tetrachloroethene	8.8	5.0	1.2	5.00	
Toluene	ND	5.0	0.64	5.00	
1,2,3-Trichlorobenzene	ND	5.0	1.4	5.00	
1,2,4-Trichlorobenzene	ND	5.0	1.7	5.00	
1,1,1-Trichloroethane	ND	5.0	1.5	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	3.1	5.00	
1,1,2-Trichloroethane	ND	5.0	1.1	5.00	
Trichloroethene	760	5.0	1.2	5.00	
Trichlorofluoromethane	ND	50	1.4	5.00	
1,2,3-Trichloropropane	ND	25	1.1	5.00	
1,2,4-Trimethylbenzene	ND	5.0	1.0	5.00	
1,3,5-Trimethylbenzene	ND	5.0	0.85	5.00	
Vinyl Acetate	ND	50	14	5.00	
Vinyl Chloride	ND	2.5	0.80	5.00	
p/m-Xylene	ND	10	1.5	5.00	
o-Xylene	ND	5.0	0.77	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	0.81	5.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	96	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 23 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-03	18-12-1831-12-A	12/19/18 10:50	Aqueous	GC/MS Z	12/29/18	12/29/18 22:53	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	2.1	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 24 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	1.7	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	120	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	89	77-120	
Dibromofluoromethane	108	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 25 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-02	18-12-1831-13-A	12/19/18 12:45	Aqueous	GC/MS Z	12/29/18	12/29/18 23:19	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	4.3	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 26 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	4.8	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	77-120	
Dibromofluoromethane	110	80-128	
1,2-Dichloroethane-d4	108	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 27 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-0200	18-12-1831-14-A	12/19/18 12:47	Aqueous	GC/MS Z	12/29/18	12/29/18 23:46	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	4.4	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 28 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	4.5	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 29 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-27766	N/A	Aqueous	GC/MS Z	12/29/18	12/29/18 16:30	181229L033

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	1.0	0.14	1.00	
Bromobenzene	ND	1.0	0.19	1.00	
Bromochloromethane	ND	2.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.23	1.00	
Bromoform	ND	5.0	1.8	1.00	
Bromomethane	ND	50	19	1.00	
2-Butanone	ND	20	6.6	1.00	
n-Butylbenzene	ND	1.0	0.30	1.00	
sec-Butylbenzene	ND	1.0	0.19	1.00	
tert-Butylbenzene	ND	1.0	0.25	1.00	
Carbon Disulfide	ND	10	0.70	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.16	1.00	
Chloroethane	ND	5.0	0.76	1.00	
Chloroform	ND	1.0	0.18	1.00	
Chloromethane	ND	10	0.50	1.00	
2-Chlorotoluene	ND	1.0	0.16	1.00	
4-Chlorotoluene	ND	1.0	0.18	1.00	
Dibromochloromethane	ND	2.0	0.46	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	2.1	1.00	
1,2-Dibromoethane	ND	1.0	0.27	1.00	
Dibromomethane	ND	1.0	0.30	1.00	
1,2-Dichlorobenzene	ND	1.0	0.14	1.00	
1,3-Dichlorobenzene	ND	1.0	0.19	1.00	
1,4-Dichlorobenzene	ND	1.0	0.24	1.00	
Dichlorodifluoromethane	ND	5.0	0.28	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.19	1.00	
1,1-Dichloroethene	ND	1.0	0.22	1.00	
c-1,2-Dichloroethene	ND	1.0	0.27	1.00	
t-1,2-Dichloroethene	ND	1.0	0.40	1.00	
1,2-Dichloropropane	ND	1.0	0.20	1.00	
1,3-Dichloropropane	ND	1.0	0.14	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 30 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.44	1.00	
1,1-Dichloropropene	ND	1.0	0.17	1.00	
c-1,3-Dichloropropene	ND	0.50	0.20	1.00	
t-1,3-Dichloropropene	ND	0.50	0.23	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	5.3	1.00	
Isopropylbenzene	ND	1.0	0.16	1.00	
p-Isopropyltoluene	ND	1.0	0.22	1.00	
Methylene Chloride	ND	10	4.0	1.00	
4-Methyl-2-Pentanone	ND	10	0.46	1.00	
Naphthalene	ND	10	5.1	1.00	
n-Propylbenzene	ND	1.0	0.18	1.00	
Styrene	ND	1.0	0.15	1.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.43	1.00	
1,1,2,2-Tetrachloroethane	ND	10	0.17	1.00	
Tetrachloroethene	ND	1.0	0.24	1.00	
Toluene	ND	1.0	0.13	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.28	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.34	1.00	
1,1,1-Trichloroethane	ND	1.0	0.31	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.62	1.00	
1,1,2-Trichloroethane	ND	1.0	0.22	1.00	
Trichloroethene	ND	1.0	0.24	1.00	
Trichlorofluoromethane	ND	10	0.28	1.00	
1,2,3-Trichloropropane	ND	5.0	0.22	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.21	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.17	1.00	
Vinyl Acetate	ND	10	2.9	1.00	
Vinyl Chloride	ND	0.50	0.16	1.00	
p/m-Xylene	ND	2.0	0.31	1.00	
o-Xylene	ND	1.0	0.15	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.16	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/18
Work Order: 18-12-1831
Preparation: EPA 3510C
Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
HEW-04	Sample	Aqueous	GC/MS DDD	12/24/18	12/28/18 15:03	181224S01
HEW-04	Matrix Spike	Aqueous	GC/MS DDD	12/24/18	12/28/18 14:16	181224S01
HEW-04	Matrix Spike Duplicate	Aqueous	GC/MS DDD	12/24/18	12/28/18 14:32	181224S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	6.379	20.00	28.11	109	26.77	102	50-130	5	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 12/20/18
Work Order: 18-12-1831
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
HEW-04	Sample	Aqueous	GC/MS Z	12/29/18	12/29/18 18:53	181229S008
HEW-04	Matrix Spike	Aqueous	GC/MS Z	12/29/18	12/30/18 01:29	181229S008
HEW-04	Matrix Spike Duplicate	Aqueous	GC/MS Z	12/29/18	12/30/18 01:54	181229S008

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	49.50	99	51.30	103	34-166	4	0-33	
Benzene	ND	50.00	55.63	111	55.27	111	75-125	1	0-20	
Bromobenzene	ND	50.00	55.92	112	55.04	110	75-125	2	0-20	
Bromochloromethane	ND	50.00	60.65	121	62.52	125	75-125	3	0-20	
Bromodichloromethane	ND	50.00	61.58	123	59.63	119	75-134	3	0-20	
Bromoform	ND	50.00	61.32	123	61.09	122	74-134	0	0-20	
Bromomethane	ND	50.00	89.90	180	100.1	200	20-168	11	0-40	3
2-Butanone	ND	50.00	46.64	93	48.21	96	37-157	3	0-20	
n-Butylbenzene	ND	50.00	55.15	110	53.86	108	73-145	2	0-20	
sec-Butylbenzene	ND	50.00	53.23	106	53.04	106	75-135	0	0-20	
tert-Butylbenzene	ND	50.00	53.09	106	54.21	108	75-136	2	0-20	
Carbon Disulfide	ND	50.00	57.47	115	58.11	116	50-152	1	0-27	
Carbon Tetrachloride	ND	50.00	57.56	115	57.90	116	70-154	1	0-20	
Chlorobenzene	ND	50.00	54.21	108	53.82	108	75-125	1	0-20	
Chloroethane	ND	50.00	64.33	129	64.94	130	41-167	1	0-26	
Chloroform	ND	50.00	58.23	116	58.69	117	75-127	1	0-20	
Chloromethane	ND	50.00	55.72	111	58.05	116	41-149	4	0-20	
2-Chlorotoluene	ND	50.00	55.07	110	54.26	109	75-128	1	0-20	
4-Chlorotoluene	ND	50.00	52.29	105	52.12	104	75-125	0	0-20	
Dibromochloromethane	ND	50.00	61.18	122	60.68	121	75-131	1	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	53.34	107	53.56	107	64-142	0	0-20	
1,2-Dibromoethane	ND	50.00	53.24	106	51.96	104	75-129	2	0-20	
Dibromomethane	ND	50.00	55.65	111	54.80	110	75-125	2	0-20	
1,2-Dichlorobenzene	ND	50.00	54.54	109	54.70	109	75-125	0	0-20	
1,3-Dichlorobenzene	ND	50.00	54.15	108	54.12	108	75-125	0	0-20	
1,4-Dichlorobenzene	ND	50.00	52.88	106	52.83	106	75-125	0	0-20	
Dichlorodifluoromethane	ND	50.00	44.93	90	44.13	88	25-157	2	0-26	
1,1-Dichloroethane	ND	50.00	50.89	102	50.40	101	73-139	1	0-20	
1,2-Dichloroethane	ND	50.00	55.50	111	53.43	107	75-125	4	0-20	
1,1-Dichloroethene	1.508	50.00	57.33	112	56.45	110	61-145	2	0-20	
c-1,2-Dichloroethene	ND	50.00	59.03	118	60.18	120	75-125	2	0-20	
t-1,2-Dichloroethene	ND	50.00	57.14	114	57.05	114	64-142	0	0-20	
1,2-Dichloropropane	ND	50.00	56.18	112	55.01	110	75-127	2	0-20	
1,3-Dichloropropane	ND	50.00	55.15	110	54.43	109	75-125	1	0-20	
2,2-Dichloropropane	ND	50.00	44.69	89	46.71	93	24-180	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/18
Work Order: 18-12-1831
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 3

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	54.10	108	54.67	109	75-135	1	0-20	
c-1,3-Dichloropropene	ND	50.00	51.88	104	50.71	101	75-137	2	0-20	
t-1,3-Dichloropropene	ND	50.00	49.35	99	49.58	99	74-146	0	0-20	
Ethylbenzene	ND	50.00	56.64	113	55.95	112	75-129	1	0-20	
2-Hexanone	ND	50.00	45.61	91	45.97	92	47-161	1	0-20	
Isopropylbenzene	ND	50.00	55.03	110	55.48	111	75-135	1	0-20	
p-Isopropyltoluene	ND	50.00	52.66	105	53.08	106	75-136	1	0-20	
Methylene Chloride	ND	50.00	55.31	111	55.65	111	63-141	1	0-20	
4-Methyl-2-Pentanone	ND	50.00	46.78	94	45.09	90	66-138	4	0-20	
Naphthalene	ND	50.00	49.71	99	50.10	100	59-143	1	0-20	
n-Propylbenzene	ND	50.00	57.18	114	57.46	115	75-133	0	0-20	
Styrene	ND	50.00	56.20	112	55.94	112	70-142	0	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	62.12	124	60.36	121	75-139	3	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	52.89	106	53.03	106	61-145	0	0-20	
Tetrachloroethene	1.573	50.00	56.35	110	56.52	110	47-143	0	0-20	
Toluene	ND	50.00	55.37	111	56.15	112	75-125	1	0-20	
1,2,3-Trichlorobenzene	ND	50.00	51.10	102	50.25	101	73-133	2	0-20	
1,2,4-Trichlorobenzene	ND	50.00	51.16	102	50.60	101	71-137	1	0-20	
1,1,1-Trichloroethane	ND	50.00	57.67	115	57.84	116	75-136	0	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	43.35	87	43.47	87	42-168	0	0-22	
1,1,2-Trichloroethane	ND	50.00	56.78	114	55.84	112	75-125	2	0-20	
Trichloroethene	162.7	50.00	212.6	100	213.9	102	67-139	1	0-20	
Trichlorofluoromethane	ND	50.00	67.71	135	69.18	138	59-155	2	0-20	
1,2,3-Trichloropropane	ND	50.00	54.44	109	55.10	110	75-127	1	0-20	
1,2,4-Trimethylbenzene	ND	50.00	54.40	109	54.15	108	75-133	0	0-20	
1,3,5-Trimethylbenzene	ND	50.00	54.16	108	54.26	109	75-135	0	0-20	
Vinyl Acetate	ND	50.00	57.01	114	61.58	123	54-180	8	0-25	
Vinyl Chloride	ND	50.00	69.58	139	70.56	141	51-153	1	0-20	
p/m-Xylene	ND	100.0	111.0	111	110.5	110	75-133	0	0-20	
o-Xylene	ND	50.00	56.63	113	56.80	114	75-134	0	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	43.60	87	44.15	88	64-136	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/18
 Work Order: 18-12-1831
 Preparation: EPA 3510C
 Method: EPA 8270C (M) SIM Isotope Dil

Project: Building 684 - Raytheon / 764.10

Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-216-1596	LCS	Aqueous	GC/MS DDD	12/24/18	12/28/18 14:00	181224L01
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
1,4-Dioxane		20.00	20.38	102	50-130	



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Project: Building 684 - Raytheon / 764.10

Date Received: 12/20/18
Work Order: 18-12-1831
Preparation: EPA 5030C
Method: EPA 8260B

Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-001-27766	LCS	Aqueous	GC/MS Z	12/29/18	12/29/18 14:43	181229L033
099-14-001-27766	LCSD	Aqueous	GC/MS Z	12/29/18	12/29/18 15:10	181229L033

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	48.55	97	49.00	98	53-137	39-151	1	0-21	
Benzene	50.00	53.43	107	51.10	102	79-121	72-128	4	0-20	
Bromobenzene	50.00	53.28	107	53.22	106	80-120	73-127	0	0-20	
Bromochloromethane	50.00	53.69	107	53.73	107	80-122	73-129	0	0-20	
Bromodichloromethane	50.00	59.93	120	57.95	116	80-124	73-131	3	0-20	
Bromoform	50.00	60.46	121	59.48	119	73-127	64-136	2	0-20	
Bromomethane	50.00	71.97	144	74.79	150	50-150	33-167	4	0-26	
2-Butanone	50.00	49.29	99	45.45	91	60-126	49-137	8	0-20	
n-Butylbenzene	50.00	55.46	111	53.25	106	72-138	61-149	4	0-20	
sec-Butylbenzene	50.00	53.19	106	51.05	102	77-131	68-140	4	0-20	
tert-Butylbenzene	50.00	52.78	106	50.62	101	80-125	72-132	4	0-20	
Carbon Disulfide	50.00	56.92	114	55.05	110	50-150	33-167	3	0-22	
Carbon Tetrachloride	50.00	58.27	117	57.47	115	65-143	52-156	1	0-20	
Chlorobenzene	50.00	52.48	105	52.72	105	80-120	73-127	0	0-20	
Chloroethane	50.00	56.84	114	58.92	118	62-128	51-139	4	0-20	
Chloroform	50.00	55.72	111	54.90	110	80-120	73-127	1	0-20	
Chloromethane	50.00	48.51	97	49.69	99	43-133	28-148	2	0-20	
2-Chlorotoluene	50.00	53.81	108	52.94	106	80-121	73-128	2	0-20	
4-Chlorotoluene	50.00	51.73	103	49.68	99	80-120	73-127	4	0-20	
Dibromochloromethane	50.00	59.71	119	60.03	120	80-123	73-130	1	0-20	
1,2-Dibromo-3-Chloropropane	50.00	55.43	111	55.55	111	66-126	56-136	0	0-20	
1,2-Dibromoethane	50.00	51.79	104	52.36	105	80-120	73-127	1	0-20	
Dibromomethane	50.00	54.46	109	53.25	106	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	50.00	53.28	107	52.54	105	80-120	73-127	1	0-20	
1,3-Dichlorobenzene	50.00	53.44	107	52.27	105	80-120	73-127	2	0-20	
1,4-Dichlorobenzene	50.00	52.34	105	50.36	101	80-120	73-127	4	0-20	
Dichlorodifluoromethane	50.00	53.73	107	52.08	104	50-150	33-167	3	0-30	
1,1-Dichloroethane	50.00	49.00	98	47.85	96	72-126	63-135	2	0-20	
1,2-Dichloroethane	50.00	52.71	105	51.60	103	76-120	69-127	2	0-20	
1,1-Dichloroethene	50.00	55.16	110	52.81	106	66-132	55-143	4	0-20	
c-1,2-Dichloroethene	50.00	56.36	113	55.49	111	78-120	71-127	2	0-20	
t-1,2-Dichloroethene	50.00	55.34	111	54.52	109	66-132	55-143	1	0-20	
1,2-Dichloropropane	50.00	53.57	107	52.29	105	80-120	73-127	2	0-20	
1,3-Dichloropropane	50.00	54.41	109	54.35	109	80-120	73-127	0	0-20	
2,2-Dichloropropane	50.00	56.09	112	52.89	106	50-150	33-167	6	0-20	
1,1-Dichloropropene	50.00	54.52	109	52.34	105	75-123	67-131	4	0-20	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/18
Work Order: 18-12-1831
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 3 of 3

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	52.07	104	51.15	102	77-131	68-140	2	0-20	
t-1,3-Dichloropropene	50.00	50.31	101	50.05	100	76-136	66-146	1	0-20	
Ethylbenzene	50.00	55.17	110	54.26	109	80-120	73-127	2	0-20	
2-Hexanone	50.00	49.79	100	50.65	101	63-123	53-133	2	0-20	
Isopropylbenzene	50.00	53.83	108	53.32	107	80-128	72-136	1	0-20	
p-Isopropyltoluene	50.00	54.35	109	51.63	103	73-133	63-143	5	0-20	
Methylene Chloride	50.00	53.31	107	52.60	105	61-133	49-145	1	0-27	
4-Methyl-2-Pentanone	50.00	52.00	104	50.11	100	65-125	55-135	4	0-20	
Naphthalene	50.00	51.81	104	50.91	102	69-129	59-139	2	0-20	
n-Propylbenzene	50.00	56.99	114	56.26	113	80-128	72-136	1	0-20	
Styrene	50.00	55.98	112	55.00	110	80-126	72-134	2	0-20	
1,1,1,2-Tetrachloroethane	50.00	59.47	119	59.13	118	80-129	72-137	1	0-20	
1,1,2,2-Tetrachloroethane	50.00	53.35	107	51.79	104	74-122	66-130	3	0-20	
Tetrachloroethene	50.00	54.18	108	52.93	106	55-139	41-153	2	0-23	
Toluene	50.00	54.41	109	53.08	106	80-120	73-127	2	0-20	
1,2,3-Trichlorobenzene	50.00	52.18	104	50.22	100	72-132	62-142	4	0-20	
1,2,4-Trichlorobenzene	50.00	52.38	105	51.02	102	74-134	64-144	3	0-20	
1,1,1-Trichloroethane	50.00	56.14	112	55.51	111	76-124	68-132	1	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	52.42	105	51.45	103	54-150	38-166	2	0-30	
1,1,2-Trichloroethane	50.00	54.77	110	55.94	112	80-120	73-127	2	0-20	
Trichloroethene	50.00	54.77	110	53.77	108	79-121	72-128	2	0-20	
Trichlorofluoromethane	50.00	68.08	136	66.75	133	72-132	62-142	2	0-20	ME
1,2,3-Trichloropropane	50.00	56.49	113	56.46	113	75-123	67-131	0	0-20	
1,2,4-Trimethylbenzene	50.00	53.56	107	51.94	104	74-128	65-137	3	0-20	
1,3,5-Trimethylbenzene	50.00	54.03	108	52.73	105	77-131	68-140	2	0-20	
Vinyl Acetate	50.00	62.42	125	61.01	122	50-150	33-167	2	0-20	
Vinyl Chloride	50.00	65.06	130	62.82	126	63-129	52-140	4	0-20	ME
p/m-Xylene	100.0	108.8	109	107.7	108	80-122	73-129	1	0-20	
o-Xylene	50.00	55.61	111	55.36	111	80-128	72-136	0	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	44.95	90	44.12	88	69-123	60-132	2	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 2

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 18-12-1831

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	1126	GC/MS Z	2
EPA 8270C (M) SIM Isotope Dil	EPA 3510C	1117	GC/MS DDD	1


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 18-12-1831

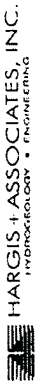
Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Revised COC received from Tyler Evans
(HARGIS) on 12/20/2018 at 17:20pm.
- Virendra (ECI)



PROJECT: Building 684 - Raytheon
TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager Tyler Evans
Phone 858-455-6500

18-12-1831

Date: 12/20/18
Page 1 of 2

Project	LAB ID	Sampled By:	SAMPLE COLLECTION		MATRIX	PRESERVATION	CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION	SPECIAL HANDLING	REMARKS
			Date	Time							
BCI Fullerton 764.10		A. DONNELLY, T. Evans D. Salas	12/19/18	0730	Groundwater		500 mL Amber				
2	TB-121918		12/19/18	0920	X	✓	40-mL VOA	✓	>1,000	Standard TAT	
3	LAX-02			1020	X	X	1	X	10-100		
4	UAX-03			1020	X	X	3	X	10-100		
5	RB-121918			0930	X	X	1	X	10-100		
6	HEW-04			1215	X	X	3	X	10-100		
7	LAX-03			1240	X	X	3	X	10-100		
8	HEW-05		12/19/18	0740	X	X	1	X	10-100		
9	HEW-02			0753	X	X	3	X	10-100		
10	LAX-01			0815	X	X	3	X	10-100		
11					X	X	1	X	10-100		

Total number of containers per analysis:

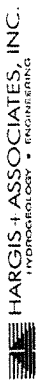
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
TWK / H&A	12/20/18 1100	TC	12/20/18 1100
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time

No. of containers correct
Received in good condition
Custody seals secure
Conforms to COC document

Send Results to:
Ken Puentes

9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

Temperature on receipt

18-12-1831Date: 12/20/18
Page 1 of 2HARGIS & ASSOCIATES, INC.
HYDROLOGY & ENGINEERING

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes

QA Manager Tyler Evans

Phone 858-455-6500

Project	LAB ID	SAMPLE ID	SAMPLE COLLECTION		MATRIX	PRESERVATION	CONTAINERS	ANALYSIS REQUESTED	ESTIMATED CONCENTRATION	SPECIAL HANDLING	REMARKS
			Date	Time							
BCI Fullerton 764.10		Sampled By: <u>A. DONNELLY, T. Evans</u>									
		<u>D. Seale</u>									
1	TB-121918		12/19/18	0730	Groundwater						
2	LAX-02			0920	Lab prepared water						
3	UAX-03			1020							
4	RB-121918			0930							
5	HEW-04			1215							
6	LAX-03			1240							
7	HEW-05			0740							
8	HEW-02			0753							
9	LAX-01			0819							

Total number of containers per analysis:

Relinquished By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

Received By: / Company:

Date / Time

☐ No. of containers correct
☐ Received in good condition
☐ Custody seals secure
☐ Conforms to COC document

Send Results to:

Ken Puentes

9171 Towne Centre Drive

Suite 375

San Diego, CA 92122

Ph: 858-455-6500

kpuentes@hargis.com

Temperature on receipt

Project Manager Ken Puentes
QA Manager Tyler Evans
Phone 858-455-6500

[illegible]

	No. of containers correct
	Received in good condition
	Custody seals secure
	Conforms to COC document

Send Results to:
Ken Puentes

9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

Temperature on receipt

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2CLIENT: Hargis & AssociatesDATE: 12/20/2018

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: 0.0°C); Temperature (w/o CF): 2.8 °C (w/ CF): 2.8 °C; ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ FilterChecked by: u6cl

CUSTODY SEAL:

Cooler ☐ Present and Intact☐ Present but Not Intact☒ Not Present☐ N/AChecked by: u6clSample(s) ☒ Present and Intact☐ Present but Not Intact☒ Not Present☐ N/AChecked by: 1053

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☒	☐	☐
COC document(s) received complete	☐	☒	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☒ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☒	☐	☐
Sample container label(s) consistent with COC	☒	☐	☐
Sample container(s) intact and in good condition	☒	☐	☐
Proper containers for analyses requested	☒	☐	☐
Sufficient volume/mass for analyses requested	☒	☐	☐
Samples received within holding time	☒	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☒
Proper preservation chemical(s) noted on COC and/or sample container	☒	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	☐	☐	☒
Container(s) for certain analysis free of headspace.....	☐	☒	☐
☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☒

CONTAINER TYPE:

(Trip Blank Lot Number: N/A)Aqueous: ☐ VOA ☒ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB ☐ 125PB_z (pH__9)☐ 250AGB ☐ 250CGB ☐ 250CGB_s (pH__2) ☐ 250PB ☐ 250PB_n (pH__2) ☒ 500AGB ☐ 500AGJ ☐ 500AGJ_s (pH__2) ☐ 500PB☐ 1AGB ☐ 1AGB_{na2} ☐ 1AGB_s (pH__2) ☐ 1AGB_s (O&G) ☐ 1PB ☐ 1PB_{na} (pH__12) ☐ _____ ☐ _____ ☐ _____Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (____): ☐ _____ ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1053s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOHReviewed by: 1017

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: Hargis & Associates

DATE: 12/20/2018
TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: 0.0°C); Temperature (w/o CF): 3.0 °C (w/ CF): 3.0 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: UGL
CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: UGL

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: 1053
SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples ☒ Yes ☐ No ☐ N/A

COC document(s) received complete ☒ Yes ☐ No ☐ N/A

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

Sampler's name indicated on COC ☒ Yes ☐ No ☐ N/A

Sample container label(s) consistent with COC ☒ Yes ☐ No ☐ N/A

Sample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/A

Proper containers for analyses requested ☒ Yes ☐ No ☐ N/A

Sufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/A

Samples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/A

Proper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals

Acid/base preserved samples - pH within acceptable range ☐ Yes ☐ No ☒ N/A

Container(s) for certain analysis free of headspace ☒ Yes ☐ No ☐ N/A

☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation ☐ Yes ☐ No ☒ N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☒ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB ☐ 125PBz_{na} (pH__9)

☐ 250AGB ☐ 250CGB ☐ 250CGBs (pH__2) ☐ 250PB ☐ 250PBn (pH__2) ☒ 500AGB ☐ 500AGJ ☐ 500AGJs (pH__2) ☐ 500PB

☐ 1AGB ☐ 1AGBna₂ ☐ 1AGBs (pH__2) ☐ 1AGBs (O&G) ☐ 1PB ☐ 1PBna (pH__12) ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____ ☐ _____ ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (____): ☐ _____ ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1053

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: 107

SAMPLE ANOMALY REPORT

DATE: 12/20/2018

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ pH outside acceptable range (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☒ Client sample label(s) do not match COC (comment)
- ☐ Project information
- ☐ Client sample ID
- ☐ Sampling date and/or time
- ☐ Number of container(s)
- ☒ Requested analysis
- ☐ Sample container(s) compromised (comment)
- ☐ Broken
- ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
- ☐ Flat
- ☐ Very low in volume
- ☐ Leaking (not transferred; duplicate bag submitted)
- ☐ Leaking (transferred into ECI Tedlar™ bags*)
- ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

MISCELLANEOUS: (Describe)

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**
10	C	3			

Comments

(-1) NO ANALYSIS requested

(-5) Received 3 x 500 ml unpreserved amber glass bottles for 1,4-Dioxane EPA 8270 not requested on the COC.

Comments

Comments: _____

Reported by: 1053

Reviewed by: 1017

** Record the total number of containers (i.e., vials or bottles) for the affected sample.